

TUCSON WATER

PLANNING AND ENGINEERING

DISTRIBUTION DESIGN SECTION

DESIGN STANDARDS ILLUSTRATIONS (DSI)

(CAPITAL IMPROVEMENT PROJECTS / MODIFICATIONS)

NOTES

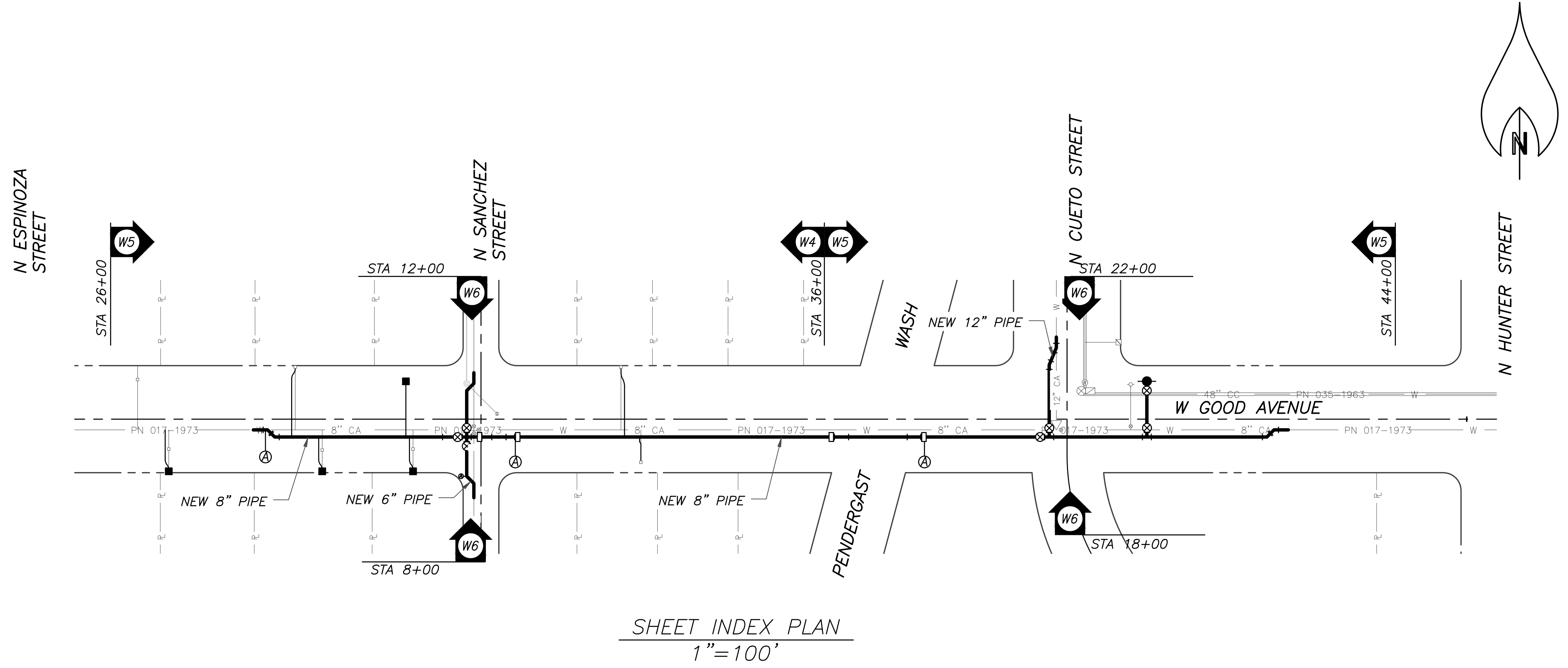
1. THE DRAWING SHEET SIZE SHALL NOT EXCEED 24" X 36".

W GOOD AVENUE
N ESPINOZA STREET TO N HUNTER STREET
CIP NO. WXXX / MODS PROGRAM CODE XXXX

THIS PROJECT

LOCATION MAP

SECTIONS 8 & 9, T 16S, R 15E
G&SR B&M, PIMA COUNTY, ARIZONA
LATITUDE 32°02'57"N. LONGITUDE 110°49'32"W
WARD (CITY OF TUCSON)
DISTRICT (PIMA COUNTY)
SCALE: 3"=1 MILE



INSPECTOR'S RECORD DRAWING COMMENTS

INSPCT.: _____

CONTR.: _____

START: _____ FINAL: _____

PIPE: _____ DI □ PVC □

SVC LINE MAT.: _____ DI □ PVC □

B.F.S.: _____

GATES: _____

F.H.'S BRAND: _____ MAT.: _____

MAGNETIC TAPE INST. YES □ NO □

TRACER WIRE INST. YES □ NO □

ALL VALVES WERE INSTALLED PER PLAN

Signature _____

Date _____

GPS LAT/LONG. YES □ NO □

SHEET INDEX

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AGENCIES LOGO					
NO.	BY	DATE	REVISION	APPR.	DATE

FOR WATER SYSTEM MODIFICATIONS (MODS) ONLY

NOT INCLUDED IN CONTRACT (NIC)
FOR WATER SYSTEM MODIFICATIONS (MODS)

TUCSON WATER

ACCEPTANCE OF THESE PLANS IS VALID FOR THREE (3) YEARS AFTER THE DATE OF SIGNATURE.

SIGNATURE OF AGENCIES IF REQUIRED

APPROVED:

CHIEF ENGINEER

DEPUTY DIRECTOR

FOR ENGINEERING AS-BUILT RECORD DRAWING STAMP

RESERVE FOR ENGINEER'S SEAL

CITY OF TUCSON

W GOOD AVENUE
N ESPINOZA STREET TO N HUNTER STREET

COVER SHEET

DESIGNED BY: XXX	DATE: XX/XX	SURVEY REQUEST NO: XXX	103 OF 185
DRAWN BY: XXX	DATE: XX/XX	SCALE: NTS	PLAN NO. X-XXX-XXXX
CHECKED BY: XXX	DATE: XX/XX	HORIZ.: 1"=100'	

TUCSON WATER GENERAL CONSTRUCTION NOTES

1.

ALL CONSTRUCTION SHALL CONFORM TO THE FOLLOWING: THE CONTRACT DOCUMENTS; TUCSON WATER STANDARD SPECIFICATIONS AND DETAILS, 2017 EDITION WITH LATEST REVISIONS; AND PAG STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS VOLUME I, 2015 EDITION; AND DRAWINGS VOLUME 2, 2015 EDITION: A COPY OF THE ABOVE REFERENCES SHALL BE MAINTAINED AT THE PROJECT SITE AT ALL TIMES. IF A CONFLICT EXISTS BETWEEN THE SPECIAL PROVISIONS IN THE CONTRACT SPECIFICATIONS AND THE STANDARD SPECIFICATIONS AND DETAILS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

2.

ALL WORK SHALL BE PERFORMED BY A CONTRACTOR LICENSED BY THE STATE OF ARIZONA, AS DETERMINED BY THE ARIZONA REGISTRAR OF CONTRACTORS (A, A-12, A-16, CR-80, AND KA).

3.

ALL NOTES IN TUCSON WATER STANDARD DETAIL (SD) SD-105, GENERAL CONSTRUCTION NOTES, SHALL APPLY TO AND BECOME AN INTEGRAL PART OF THIS PROJECT.

4.

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS.

5.

THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY, DURING THE COURSE OF THE PROJECT. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

6.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SERVICE TO ALL WATER CUSTOMERS DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WHICH SERVICES WILL BE AFFECTED BY THIS PROJECT. IT MAY BE NECESSARY TO ACCOMPLISH TIE-OVERS, RECONNECTIONS, ETC. WHILE BUSINESS CUSTOMERS ARE CLOSED. IF INTERRUPTION OF SERVICE IS UNAVOIDABLE, THE CONTRACTOR SHALL NOTIFY THE WATER INSPECTOR A MINIMUM OF 14 DAYS IN ADVANCE TO COORDINATE SHUT-DOWNS. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION TO THE CUSTOMER. IF THE CONTRACTOR CHOOSES TO ABANDON ANY PORTION OF THE EXISTING WATER SUPPLY SYSTEM WITHOUT CONCURRENT NEW CONSTRUCTION AS CALLED FOR ON THE PLANS, THE CONTRACTOR SHALL PROVIDE ANY AND ALL MATERIALS AND CONSTRUCTION OF A TEMPORARY OR PERMANENT WATER SYSTEM TO MAINTAIN CONTINUED WATER SERVICE TO CUSTOMERS AT NO ADDITIONAL COST.

7.

FOURTEEN (14) DAYS PRIOR TO SHUT-DOWN OF ANY FIRE HYDRANTS OR FIRE PROTECTION SERVICE LINES, THE CONTRACTOR SHALL PROVIDE THE CITY TUCSON OF TUCSON WATER DEPARTMENT CONSTRUCTION INSPECTOR WITH A WRITTEN REPORT INDICATING THE LOCATION AND DURATION OF ANY FIRE HYDRANT OR FIRE PROTECTION SERVICE SHUT-DOWNS. THE CONTRACTOR SHALL NOTIFY THE CITY OF TUCSON WATER DEPARTMENT CONSTRUCTION INSPECTOR WHEN FIRE HYDRANTS OR FIRE PROTECTION SERVICES ARE BACK IN SERVICE.

8.

THE CONTRACTOR SHALL MAINTAIN OPERATION OF EXISTING TRAFFIC SIGNALS, STREET LIGHTING, AND RELATED SYSTEMS AT ALL TIMES THROUGHOUT THE AREA OF CONSTRUCTION, AND SHALL BE RELOCATED BY CONTRACTOR AS REQUIRED. CONTACT CITY OF TUCSON DEPARTMENT OF TRANSPORTATION TRAFFIC ENGINEERING AT (520) 791-4259 OR CONTACT PIMA COUNTY DEPARTMENT OF TRANSPORTATION TRAFFIC ENGINEERING AT (520) 791-4259 FOR RELOCATION INSTRUCTIONS AS REQUIRED.

9.

THE CONTRACTOR SHALL EXERCISE CAUTION DURING CONSTRUCTION ACTIVITIES NEAR OR DIRECTLY UNDER OVERHEAD ELECTRIC FACILITIES. THE COST FOR ELECTRIC OVERHEAD PROTECTION IS BILLABLE TO THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE ELECTRIC UTILITY OWNER:

A. TUCSON ELECTRIC POWER THE CONTRACTOR SHALL COMPLETE A TUCSON ELECTRIC POWER OVERHEAD/EXCAVATION PROTECTION APPLICATION AT LEAST TWO (2) WEEKS PRIOR TO START OF CONSTRUCTION. CONTACT TUCSON ELECTRIC POWER AT BLUESTAKECOORDINATORTEP@TEP.COM OR (520) 917-2617.

B. TRICO ELECTRIC COOPERATIVE THE CONTRACTOR SHALL CONTACT TRICO ELECTRIC COOPERATIVE, AT LEAST THREE (3) DAYS PRIOR TO CONSTRUCTION NEAR OR DIRECTLY UNDER ANY TRICO OVERHEAD ELECTRIC FACILITIES, FOR A STAND-BY CREW. CONTACT LARRY ASH AT (520) 794-2944 EXT. 1368.

10.

THE OWNER/ENGINEER DOES NOT WARRANT THE LOCATION OF EXISTING UTILITIES SHOWN ON THE DRAWINGS TO BE EXACT, NOR IS IT WARRANTED THAT ALL EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS IN THE CITY OF TUCSON/PIMA COUNTY STANDARD SPECIFICATIONS SECTION 107-21, PAG STANDARD SPECIFICATIONS SECTION 107-21, AND WITH THE REQUIREMENTS OF ARIZONA REVISED STATUTES TITLE 40, INCLUDING PROVISIONS FOR DETERMINING THE LOCATION OF ALL UTILITIES IN THE WORK AREA PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY IMPROVEMENTS ENCOUNTERED IN THE COURSE OF THE WORK.

11.

THE CONTRACTOR SHALL CONTACT ARIZONA 811 (FORMERLY ARIZONA BLUE STAKE) AT 811 OR (800) 782-5348 AT LEAST TWO (2) WORKING DAYS PRIOR TO START OF CONSTRUCTION.
12.

ALL DIMENSIONS AND GRADES FOR EXISTING WATER LINES ARE TAKEN FROM "AS-BUILT" DRAWINGS, AND MAY SCHEMATIC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXACT INFORMATION REQUIRED FOR NEW CONSTRUCTION.

13.

THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND ELEVATIONS OF ALL TIE-IN LOCATIONS PRIOR TO THE START OF ANY CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITH THE DRAWINGS INCLUDING CONFLICTS THAT MAY NOT SHOWN.

14.

ANY SURVEY MONUMENT OR PROPERTY CORNER DISTURBED BY THIS CONSTRUCTION SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE BY A LAND SURVEYOR REGISTERED TO PRACTICE IN THE STATE OF ARIZONA, AND A RECORD OF SURVEY SHALL BE REQUIRED.

15.

PIPELINE STATIONING AND OFFSETS FOR THIS PROJECT ARE FROM THE SURVEY CONTROL LINE, UNLESS OTHERWISE NOTED. ALL STATIONING IS ALONG THE SURVEY CONTROL LINE WITH OFFSETS TO THE PIPELINE.

16.

IN DEVELOPED LOCATIONS, NEW WATER MAIN SHALL BE INSTALLED WITH 44 INCHES MINIMUM COVER UNLESS OTHERWISE NOTED ON THE DRAWINGS. IN NON-DEVELOPED LOCATIONS, NEW WATER MAIN SHALL BE INSTALLED WITH 60 INCHES MINIMUM COVER UNLESS OTHERWISE NOTED ON THE DRAWINGS.

17.

UNLESS OTHERWISE NOTED, ALL ____" DUCTILE IRON PIPE SHALL BE PRESSURE CLASS ____, AND ALL ____" DUCTILE IRON PIPE WITHIN ____" STEEL PIPE CASINGS SHALL BE MINIMUM PRESSURE CLASS 250.

18.

UNLESS OTHERWISE NOTED, 4" TO 12" PVC PIPE SHALL BE DIMENSION RATIO 14 (DR 14), PRESSURE CLASS 305 (DUCTILE IRON OD), AND 16" PVC PIPE SHALL BE DIMENSION RATIO 18 (DR 18), PRESSURE CLASS 235 (DUCTILE IRON OD).

19.

THE CONTRACTOR SHALL NOT DEFLECT PVC PIPE AT GASKETED BELL AND SPIGOT JOINTS OR AS LONGITUDINAL BENDING IN THE PIPE SEGMENT. THE CONTRACTOR SHALL ONLY DEFLECT PVC PIPE AT MECHANICAL JOINT SOLID SLEEVE FITTINGS OR STANDARD DUCTILE IRON BENDS/FITTINGS. PVC PIPE MAY BE DEFLECTED AT DUCTILE IRON BENDS OR FITTINGS PROVIDED THE DEFLECTION IS WITHIN AMERICAN WATER WORKS ASSOCIATION (AWWA) AND THE MANUFACTURERS ALLOWABLE DEFLECTION FOR THE BEND OR FITTING AND THE PIPE AT THE CONNECTION POINT.

20.

ALL FITTINGS SHALL BE DUCTILE IRON AND CONNECTIONS SHALL BE MADE WITH APPROVED ADAPTERS. ALL DUCTILE IRON FITTINGS SHALL BE MINIMUM CLASS 250.

21.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COMBINATION AIR RELEASE IN THE CONSTRUCTION AREA. THE LOCATION OF COMBINATION AIR RELEASE VALVES AS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE WITH THE TUCSON WATER CONSTRUCTION INSPECTOR TO DETERMINE IN THE FIELD THE MOST EFFECTIVE AND EXACT LOCATIONS FOR COMBINATION AIR RELEASE VALVES.

22.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WATER METERS AND METER BOXES IN THE CONSTRUCTION AREA. THIS SHALL INCLUDE AND NOT BE LIMITED TO:

A. REMOVAL: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE EXISTING METERS FROM THE METER BOXES, ALONG WITH THE REMOVAL OF THE EXISTING METER BOXES AND CAPPING/PLUGGING OF THE EXISTING SERVICE CONNECTION.

B. RELOCATION/INSTALLATION: DURING THIS OPERATION, METERS SHALL BE TAGGED WITH THE CORRECT ADDRESS TO VERIFY THEIR REINSTALLATION AT THE SAME LOCATION IF THE EXISTING METER IS AN AUTOMATED METER READER (AMR) WATER METER. IF THE EXISTING METER IS NOT AN AMR THE METER IS EXCHANGED/RETURNED TO TUCSON WATER FOR A NEW AMR TO BE INSTALLED AT THAT LOCATION.

C. PROTECTION OF METERS: AT ALL TIMES THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID ANY DAMAGE TO METERS. THE CONTRACTOR SHALL PROVIDE FOR THEIR SAFE STORAGE AND THE PROPER EQUIPMENT FOR THEIR HANDLING.

D. ACCESS TO METERS: THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL IN-SERVICE METERS DURING CONSTRUCTION. AT THE CLOSE OF THE PROJECT, THE CONTRACTOR SHALL CONFIRM THAT ALL METERS AND ALL METER BOXES ARE LEFT ACCESSIBLE AND THAT ALL METER BOXES ARE ADJUSTED TO FINAL GRADE.

E. MATERIALS: TUCSON WATER SHALL SUPPLY ALL NEW AMR MODEL WATER METERS AND METER BOXES TO BE INSTALLED AS PART OF THIS PROJECT.

F. DISPOSAL OF EXISTING METER BOXES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OF ALL EXISTING METER BOXES NOT SUITABLE FOR REUSE/REINSTALLATION.

23.

IF ANY EXISTING DETECTABLE MARKING TAPE IS DISTURBED OR DESTROYED DURING CONSTRUCTION, THE CONTRACTOR SHALL FURNISH AND INSTALL APPROPRIATE NEW TAPE. THERE SHALL BE NO ADDITIONAL CHARGE FOR THIS REINSTALLATION.
24.

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL PIPE, FITTINGS, APPURTENANCES OR ANY OTHER MATERIALS TO BE IN CONTACT WITH POTABLE WATER IN ACCORDANCE WITH THE LEAD-FREE REQUIREMENTS DEFINED BY THE "REDUCTION OF LEAD IN DRINKING WATER ACT OF 2011" AMENDING SECTION 1417 OF THE SAFE DRINKING WATER ACT.
25.

ALL EXCAVATIONS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH TUCSON WATER STANDARD SPECIFICATIONS.
26.

REMOVAL OF WATER LINES SHALL INCLUDE FURNISHING AND INSTALLING BACKFILL AND COMPACTION TO MATCH EXISTING GRADE. COMPACTION REQUIREMENTS SHALL BE THE REQUIREMENTS OF THE AGENCY WITH JURISDICTION.
27.

IF GROUTING OF ABANDONED WATER LINES IN JACKED AND BORED STEEL PIPE CASINGS ARE REQUIRED, THE CONTRACTOR SHALL PROVIDE A GROUTING PLAN IN ACCORDANCE WITH SPECIFICATIONS TO INCLUDE THE EXACT LOCATION OF GROUT INSERTION POINTS.
28.

SOIL BORINGS IF AVAILABLE ARE APPROXIMATELY LOCATED AND NUMBERED ON THE PLANS. LOGS AND SOIL DESCRIPTIONS ARE APPENDED TO THE SPECIFICATIONS BUT ARE NOT PART OF THE CONTRACT DOCUMENTS. INFORMATION CONTAINED IN THE BORING LOGS HAS BEEN USED FOR DESIGN PURPOSES ONLY AND THE CONTRACTOR SHALL NOT RELY ON THIS FOR CONSTRUCTION PURPOSES.

SEWER CONSTRUCTION NOTES

1.

ALL DESIGN STANDARDS, MATERIALS AND WORKMANSHIP FOR PUBLIC SANITARY SEWERS SHALL BE IN ACCORDANCE WITH THE PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT (PCRWRD) ENGINEERING DESIGN STANDARDS 2016 (EDS 2016) AND THE STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 (SSDC 2016). SAID DOCUMENTS ARE AVAILABLE THROUGH THE PCRWRD WEBSITE (www.pima.gov/wastewaterreclamation).
2.

THE CONTRACTOR SHALL CONTACT "ARIZONA 811" (DIAL 811 OR 1-800-782-5348) A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL KEEP ALL UNDERGROUND FACILITY LOCATION REQUESTS UP-TO-DATE AND COMPLY WITH ARIZONA REVISED STATUTES (A.R.S.), TITLE 40, CHAPTER 1, ARTICLE 6.3, SECTION 40-360.22. CONCERNS REGARDING THE ACCURACY BETWEEN THE UNDERGROUND FACILITY MARKINGS AND THE PROJECT PLANS SHALL BE IMMEDIATELY REPORTED TO THE DESIGN ENGINEER.
3.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SANITARY SEWER MANHOLES AT ALL TIMES.
4.

THE CONTRACTOR SHALL FIELD-VERIFY EXISTING SEWER LINE ELEVATIONS AND ALIGNMENTS PRIOR TO CONSTRUCTION. VERIFICATION MAY REQUIRE POT-HOLING.
5.

ANY HOUSE CONNECTION SEWER (HCS) OR BUSINESS CONNECTION SEWER (BCS) LINES ENCOUNTERED DURING CONSTRUCTION SHALL BE PROTECTED, REPAIRED, OR REROUTED, AS THE SITUATION DICTATES, PER PCRWRD SSDC 2016 DETAIL NO. RWRD 400 AND AT NO EXPENSE TO THE PROPERTY OWNER OR PCRWRD. HCS AND BCS LINES ARE NOT OWNED OR MAINTAINED BY PCRWRD. PRIVATE CONNECTION SEWERS CONSTRUCTED PRIOR TO JANUARY 2006 ARE NOT REQUIRED TO BE LOCATED AND MARKED.
6.

IMMEDIATELY REPORT ANY OF THE FOLLOWING TO THE PCRWRD OPERATIONS CONTROL CENTER (OCC) AT (520) 724-6500: ANY RELEASE OF SEWAGE, ANY DAMAGE TO THE PUBLIC SANITARY SEWER SYSTEM, OR THE DROPPING OF DEBRIS INTO A PUBLIC SANITARY SEWER MANHOLE. A PCRWRD REPRESENTATIVE WILL BE DISPATCHED TO THE SITE. THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION TO CONTAIN A SANITARY SEWAGE OVERFLOW (SSO). THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO REPAIR THE SYSTEM, MITIGATE THE RELEASE OF SEWAGE, DISINFECT THE RELEASE AREAS, AND ANY REGULATORY PENALTIES LEVIED ON PCRWRD FOR SEWAGE ENTERING A NATURAL DRAINAGE WAY OR STORM WATER DRAINAGE SYSTEM. THE CONTRACTOR SHALL REPAIR ALL DAMAGE AS DIRECTED AND APPROVED BY THE PCRWRD FIELD REPRESENTATIVE.
7.

MODIFICATION TO OR ADJUSTMENT OF EXISTING PIMA COUNTY SEWER FACILITIES SHALL NOT COMMENCE UNTIL: (A) THE CONTRACTOR HAS OBTAINED A PCRWRD PUBLIC SEWER CONSTRUCTION PERMIT (CONTACT THE PCRWRD PERMITS SECTION AT (520) 724-6649 FOR PERMIT APPLICATION REQUIREMENTS); (B) THE CONTRACTOR'S FLOW MANAGEMENT PLAN HAS BEEN SUBMITTED THIRTY (30) CALENDAR DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING AND APPROVED BY PCRWRD FIELD ENGINEERING; AND (C) A PRE-CONSTRUCTION MEETING WITH THE ASSIGNED PIMA COUNTY PROJECT FIELD INSPECTOR IS SCHEDULED AT LEAST THREE (3) FULL BUSINESS DAYS PRIOR TO COMMENCING WITH SEWER CONSTRUCTION.

8.

THE CONTRACTOR SHALL SUBMIT A FLOW MANAGEMENT PLAN (FMP) TO PCRWRD FIELD ENGINEERING FOR APPROVAL BEFORE PROCEEDING WITH ANY WORK THAT MAY AFFECT LIVE SEWERS. THE FMP SHALL IDENTIFY AND INCLUDE ALL FLOW MANAGEMENT COSTS IN THE CONSTRUCTION BID. THE FMP SHALL BE SUBMITTED THIRTY (30) CALENDAR DAYS PRIOR TO THE SEWER PRE-CONSTRUCTION MEETING. FIELD ENGINEERING WILL REVIEW THE FMP WITHIN TEN (10) BUSINESS DAYS TO ACCOMMODATE REVIEW AND REVISION CYCLES. REFER TO PCRWRD SSDC 2016, SECTION 2 FOR FMP REQUIREMENTS. PLEASE CONTACT PCRWRD FIELD ENGINEERING AT (520) 724-2651 FOR ANY QUESTIONS REGARDING FLOW MANAGEMENT.
9.

AS-BUILT PLANS SHALL CONFORM TO SSDC 2016, SECTION 1.4.7 AND ARE REQUIRED FOR FINAL ACCEPTANCE OF SEWER CONSTRUCTION BY PCRWRD.
10.

STORM WATER AND SEDIMENT CONTROL MEASURES SHALL BE PROPERLY INSTALLED TO PROTECT PCRWRD MANHOLES AT THE BEGINNING OF CONSTRUCTION IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSTANTLY MAINTAIN STORM WATER AND SEDIMENT CONTROL MEASURES THAT PROTECT PCRWRD FACILITIES UNDER ALL CONDITIONS FOR THE DURATION OF THE PROJECT. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR ALLOW STORM WATER, SEDIMENT, OR POTENTIAL POLLUTANTS FROM A CONSTRUCTION SITE TO ENTER A PCRWRD MANHOLE. THE CONTRACTOR SHALL ENSURE THAT THEIR FLOW MANAGEMENT OPERATIONS INCLUDE CONTROLS TO PREVENT ANY INTRODUCTION OF STORM WATER, SEDIMENT, OR POLLUTANTS INTO THE PUBLIC SANITARY SEWER SYSTEM. FAILURE TO CONFORM TO THESE REQUIREMENTS SHALL RESULT IN CANCELLATION OF THE SEWER CONSTRUCTION PERMIT.
11.

ANY WORK INSIDE OR AROUND AN EXISTING SANITARY SEWER MANHOLE, INCLUDING MANHOLES THAT ARE LOCATED WITHIN THE ROUGH GRADING LIMITS FOR A PROJECT, SHALL BE PROTECTED FROM FALLING DEBRIS BY INSTALLING A TEMPORARY FLOW CHANNEL COVER PER PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, STANDARD DETAIL RWRD-306. THE CONTRACTOR SHALL REMOVE ANY DEBRIS THAT ENTERS A MANHOLE DURING CONSTRUCTION FAILURE BY THE CONTRACTOR TO PROMPTLY REMOVE DEBRIS FROM A MANHOLE SHALL RESULT IN PCRWRD TAKING CORRECTIVE ACTION THAT WILL THEN BE BILLED TO THE CONTRACTOR.

PIMA COUNTY DEPARTMENT OF TRANSPORTATION NOTES

1.

THE CONTRACTOR SHALL OBTAIN AN RIGHT-OF-WAY PERMIT FROM PIMA COUNTY TRANSPORTATION DEPARTMENT PRIOR TO ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
2.

A PRE-CONSTRUCTION FIELD MEETING SHALL BE CONDUCTED WITH PIMA COUNTY TRANSPORTATION INSPECTOR PRIOR TO ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
3.

THE EXTENT AND TYPE OF SURFACE TREATMENTS/REPAIRS INDICATED ON THE PLANS MAY NOT BE ALL INCLUSIVE OF THE WORK THAT IS NEEDED. DEPENDING ON FIELD CONDITIONS, ADDITIONAL WORK MAY BE REQUIRED.
4.

THE CONTRACTOR SHALL OBTAIN A FLOODPLAIN USE PERMIT FROM PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT FOR WORK WITHIN THE LIMITS OF ANY WASH SHOWN ON THESE DRAWINGS.
5.

THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM PIMA COUNTY TRANSPORTATION DEPARTMENT PRIOR TO ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.

CITY OF TUCSON DEPARTMENT OF TRANSPORTATION NOTES

1.

THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM THE CITY OF TUCSON TRANSPORTATION DEPARTMENT PRIOR TO ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
2.

A PRE-CONSTRUCTION FIELD MEETING SHALL BE CONDUCTED WITH THE CITY OF TUCSON TRANSPORTATION INSPECTOR PRIOR TO ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
3.

THE EXTENT AND TYPE OF SURFACE TREATMENTS/REPAIRS INDICATED ON THE PLANS MAY NOT BE ALL INCLUSIVE OF THE WORK THAT IS NEEDED. DEPENDING ON FIELD CONDITIONS, ADDITIONAL WORK MAY BE REQUIRED.
4.

THE CONTRACTOR SHALL OBTAIN A FLOODPLAIN USE PERMIT FROM PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT FOR WORK WITHIN THE LIMITS OF ANY WASH SHOWN ON THESE DRAWINGS.

FOR WATER SYSTEM
MODIFICATIONS (MODS) ONLY

W2 OF W12



CITY OF TUCSON

W GOOD AVENUE
N ESPINOZA STREET TO N HUNTER STREET

RESERVE FOR
ENGINEER'S
SEAL

GENERAL NOTES

DESIGNED BY: XXX	DATE: XX/XX	FIELD BOOK NO. XXX	104 OF 185
DRAWN BY: XXX	DATE: XX/XX	SCALE:	
CHECKED BY: XXX	DATE: XX/XX	VERT: NTS HORIZ: NTS	

PLAN NO.
X-XXX-XXXX

(MODIFICATIONS ONLY)TW PLAN NO X-XXX-XXXX

AGENCIES LOGO



LEGEND

WATER SYMBOLS

FEATURE	NEW	EXISTING
WATER MAIN (LATERAL).....		
RECLAIMED WATER MAIN.....		
BEND (SOLID SLEEVE, 11.25, 22.5, 45, 90).....		
TEE, CROSS, VERTICAL BEND PLAN VIEW.....		
REDUCER/INCREASER.....		
PIPE MATERIAL CHANGE.....		
CORROSION TEST STATION (CTS).....		
CORROSION TEST STATION (CTS) W/ ANODES.....		
COMBINATION AIR RELEASE AND VACUUM VALVE ASSEMBLY AND SIZE (ARV).....		
BLOW-OFF VALVE AND SIZE (BOV).....		
BACKFLOW PREVENTER.....		
GATE VALVE, RECLAIMED.....		
BUTTERFLY VALVE, RECLAIMED.....		
DRAIN VALVE ASSEMBLY, RECLAIMED.....		
MODIFIED DRAIN VALVE ASSEMBLY, RECLAIMED.....		
FIRE HYDRANT.....		
FIRE SERVICE.....		
PRESSURE REDUCING VALVE (PRV).....		
WATER METER.....		
WATER MANHOLE.....		
WATER VALVE IN MANHOLE.....		
WATER POTABLE WELL.....		
WATER QUALITY SAMPLING.....		
GATE VALVE (PROFILE).....		
BUTTERFLY VALVE (PROFILE).....		
RECLAIMED WATER (PROFILE).....		
RELOCATION SERVICE LINE RENEWAL (M/R).....		
SERVICE LINE RENEWAL (R).....		
METER RELOCATION SERVICE LINE ADJUSTMENT.....		
SERVICE STUB (S).....		
SERVICE LINE ADJUSTMENT (S/A).....		
WATER SERVICE TIE-OVER (T).....		
PRIVATE PLUMBING.....		
ABANDONMENT (CUT & PLUG).....		
SACRIFICIAL ANODES.....		

BOUNDARY AND MARKER SYMBOLS

100-YEAR FLOOD PLAIN.....	
EASEMENT.....	
LIMITS OF CONSTRUCTION.....	
PROPERTY LINE.....	
RIGHT-OF-WAY (R/W).....	
SCOUR LIMITS.....	
SECTION LINE.....	
SURVEY BRASS OR ALUMINUM MONUMENTS.....	
SURVEY COTTON SPINDLE.....	
SURVEY CUT OR CHISELED CROSS.....	
SURVEY CUT OR CHISELED CROWS FOOT.....	
SURVEY IRON PINS.....	
SURVEY NAILS.....	
SURVEY PIPES.....	
SURVEY RAILROAD SPIKE.....	
SURVEY STONE MONUMENT.....	

SHEET INDEX SYMBOL

SHEET INDEX.....	
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UTILITY SYMBOLS

FEATURE	SYMBOL
EXIST SANITARY SEWER.....	
EXIST BUSINESS CONNECTION SEWER.....	
EXIST HOUSE CONNECTION SEWER.....	
EXIST STORMDRAIN.....	
EXIST GAS.....	
EXIST UNDERGROUND ELECTRIC.....	
EXIST OVERHEAD ELECTRIC.....	
EXIST UNDERGROUND TELEPHONE.....	
EXIST OVERHEAD TELEPHONE.....	
EXIST UNDERGROUND CABLE TV.....	
EXIST OVERHEAD CABLE TV.....	
EXIST UNDERGROUND FIBER OPTIC.....	
EXIST OVERHEAD FIBER OPTIC.....	
EXIST SEWER MANHOLE.....	
EXIST SEWER CLEAN-OUT.....	
EXIST STORMDRAIN MANHOLE.....	
EXIST GAS METER.....	
EXIST GAS VALVE.....	
EXIST ELECTRIC BOX (CABINET).....	
EXIST POWER POLE W/GUY.....	
EXIST ELECTRIC MANHOLE.....	
EXIST ELECTRIC PEDESTAL.....	
EXIST ELECTRIC PULLBOX.....	
EXIST TRAFFIC PULLBOX.....	
EXIST ELECTRIC TRANSFORMER.....	
EXIST STREET LIGHT (WITH MAST).....	
EXIST TRAFFIC LIGHT.....	
EXIST TELEPHONE MANHOLE.....	
EXIST MANHOLE (FIBER OPTIC).....	
EXIST TELEPHONE PEDESTAL.....	
EXIST TELEPHONE POST.....	
EXIST UNKNOWN PEDESTAL.....	
EXIST MANHOLE (UNKNOWN).....	
EXIST CABLE TV PEDESTAL.....	
EXIST COMMUNICATION PULLBOX.....	
POST UTILITY MARKER (WATER, RECLAIMED WATER, GAS FIBER OPTIC).....	
EXIST IRRIGATION CONTROL VALVE.....	
EXIST IRRIGATION CONTROL VALVE RECLAIMED.....	
SURVEY CONTROL LINE.....	
POTHOLE SYMBOL.....	
SOIL BORING LOCATION AND NO.....	

PHYSICAL CULTURE

NEW PAVEMENT REPLACEMENT.....	
EXIST TREE(MESQ., PALO VERDE, PALM, PINE, STUMP).....	
NEW PAVEMENT CHIP SEAL.....	
NEW BRICK.....	
NEW CONCRETE.....	
NEW GRAVEL.....	
EXIST BRICK.....	
EXIST CONCRETE.....	
EXIST RIPRAP.....	
EXIST CURB.....	
EXIST PAVED ROADWAY.....	
EXIST PAVED ROADWAY WITH CURB.....	
EXIST PAVED ROADWAY WITH GUTTER AND CURB.....	
EXIST FENCE LINE.....	
EXIST CHAIN LINK FENCE LINE.....	
EXIST WROUGHT IRON FENCE LINE.....	
EXIST GUARD RAIL.....	

ABBREVIATIONS

&	AND	NPI	NON PAY ITEM
ℓ	PROPERTY LINE	NTS	NOT TO SCALE
AHD	AHEAD	OHE	OVERHEAD ELECTRIC
APPROX	APPROXIMATELY	PAG	PIMA ASSOCIATION OF GOVERNMENTS
ARV	AIR RELEASE VALVE	PC	POINT OF CURVATURE
ASM	ALUMINUM SURVEY MONUMENT	PCDOT	PIMA COUNTY DEPT OF TRANSPORTATION
B & C	BOX & COVER	PCFCD	PIMA COUNTY FLOOD CONTROL DISTRICT
BFV	BUTTERFLY VALVE	PCRWRD	PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
BK	BACK	PE	PLAIN END OR POLYETHYLENE
BSM	BRASS SURVEY MONUMENT	PED	PEDESTAL
BTWN	BETWEEN	PN	PLAN NUMBER
CA	CEMENT ASBESTOS	PP	POWER POLE
CALC	CALCULATED	PT	POINT OR POINT OF TANGENCY
CAV	COMBINATION AIR RELEASE VALVE	PVC	POLYVINYL CHLORIDE
CIR	CIRCLE	R/W	RIGHT-OF-WAY
CONC	CONCRETE	RB	REBAR
CTS	CORROSION TEST STATION	RCP	REINFORCED CONCRETE PIPE
CU	COPPER	RD	ROAD
CL	CENTER LINE	RED	REDUCER
DET	DETAIL	RO	ROTATED
DIP	DUCTILE IRON PIPE	RT	RIGHT
DR	DRIVE	S	SOUTH
DVA	DRAIN VALVE ASSEMBLY	SD-XXX	STANDARD DETAIL
E	EAST	SHT	SHEET
ECC	ECCENTRIC	SMH	SANITARY MANHOLE
EG	EXISTING GRADE	SQ	SQUARE
ELEC	ELECTRIC	SS	STAINLESS STEEL OR SANITARY SEWER (PCWWMD)
ELEV	ELEVATION	ST	STREET OR SPIRAL TO TANGENT
EPNG	EL PASO NATURAL GAS	STA	STATION
EXIST	EXISTING	STL	STEEL
FG	FINISH GRADE	SW	SOUTHWEST
FH	FIRE HYDRANT	TELE	TELEPHONE OR TELEGRAPH
FIK	FLANGED INSULATION KIT	THK	THICK
FLG	FLANGE	TS&V	TAPPING SLEEVE AND VALVE
FTG	FOOTING	TV	CABLE TV
G	NATURAL GAS	TW	TUCSON WATER
GM	GAS METER	UNK	UNKNOWN
GV	GATE VALVE	VCP	VITRIFIED CLAY PIPE
HCS	HOUSE CONNECTION SEWER	VERT	VERTICAL
HDPE	HIGH DENSITY POLYETHYLENE	W	WEST
HORIZ	HORIZONTAL	WE	WATER EASEMENT
HWY	HIGHWAY	WO	WORK ORDER
INV	INVERT	X	BY
LF	LINEAR FEET	YD	YARD
LP	LIGHT POLE		
LT	LEFT		
MAX	MAXIMUM		
MH	MAN HOLE		
MIN	MINIMUM		
MJ	MECHANICAL JOINT		
N	NORTH		

FOR WATER SYSTEM
MODIFICATIONS (MODS) ONLY

W3 OF W12



CITY OF TUCSON
W GOOD AVENUE
N ESPINOZA STREET TO N HUNTER STREET

RESERVE FOR
ENGINEER'S
SEAL

ABBREVIATIONS, AND LEGEND

DESIGNED BY: XXX	DATE: XX/XX	FIELD BOOK NO. XXX	105 OF 185
DRAWN BY: XXX	DATE: XX/XX	SCALE:	
CHECKED BY: XXX	DATE: XX/XX	VERT: NTS	
		HORIZ: NTS	

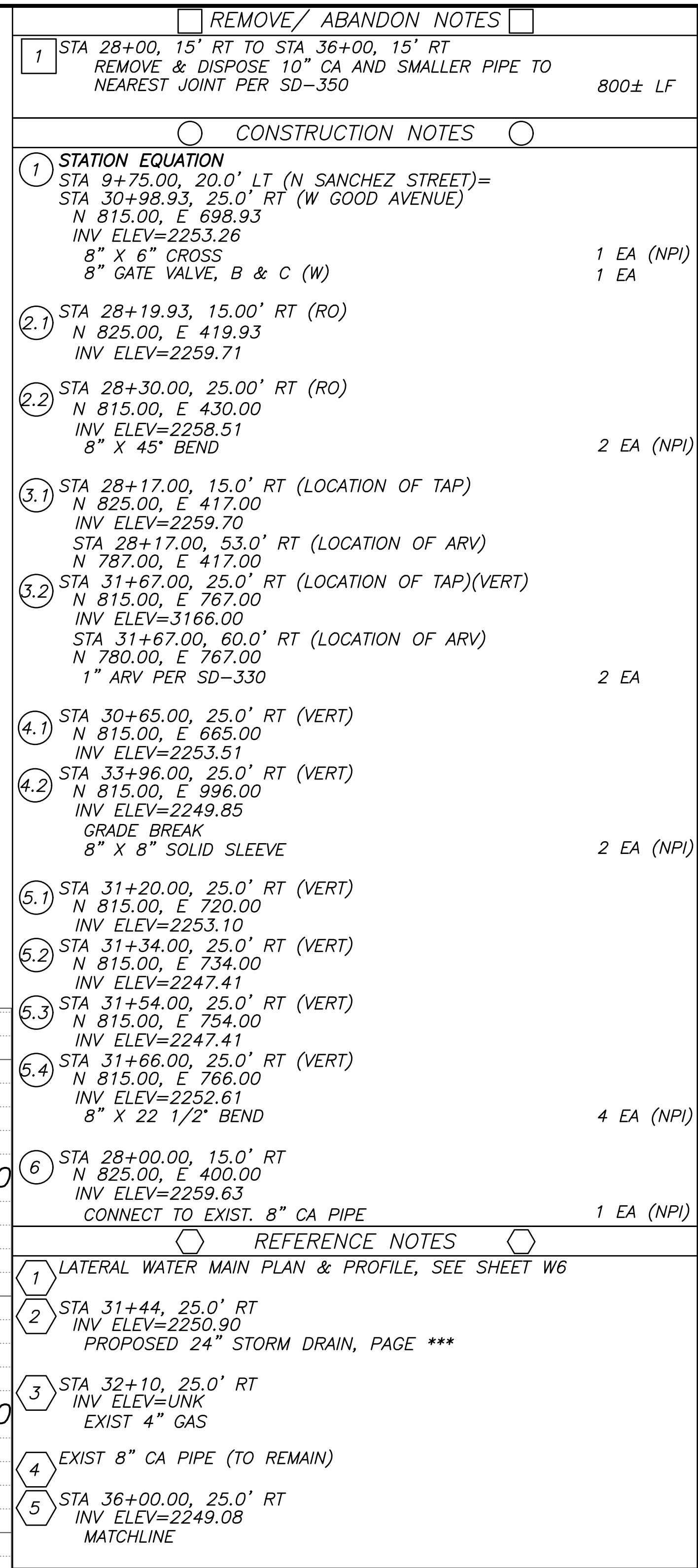
PLAN NO.
X-XXX-XXXX

(MODIFICATIONS ONLY)TW PLAN NO X-XXX-XXXX

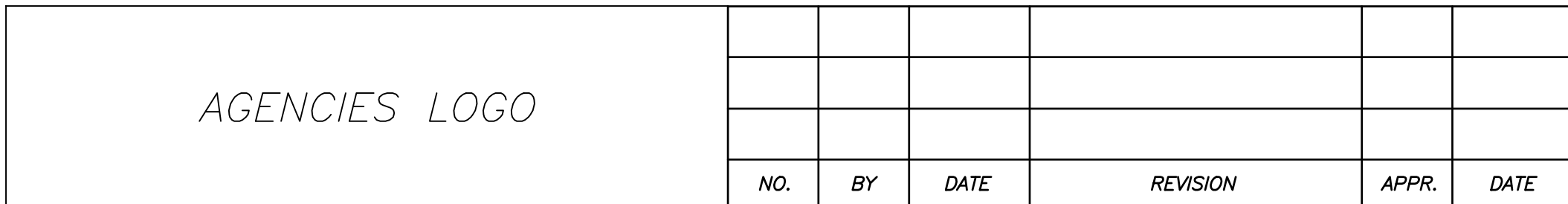
AGENCIES LOGO



NO.	BY	DATE	REVISION	APPR.	DATE



WATERLINE TABLE			
W#	BEARING	LENGTH	SIZE / MATERIAL
W10	N90°00'00"E	19.9 LF	8" PVC PC305 (DR14)
W11	S45°12'17"E	14.2 LF	8" PVC PC305 (DR14)
W12	N90°00'00"E	290.0 LF	8" PVC PC305 (DR14)
W13	N90°00'00"E	47.0 LF	8" DIP CL350
W14	N90°00'00"E	433.0 LF	8" PVC PC305 (DR14)



TUCSON

WATER

A proud part of the City of Tucson

CITY OF TUCSON

W GOOD AVENUE

N ESPINOZA STREET TO N HUNTER STREET

STREET

RESERVE FOR

ENGINEER'S

SEAL

W GOOD AVENUE

STA 26+00 TO STA 36+00

DESIGNED BY:
XXX

DRAWN BY:
XXX

CHECKED BY:
XXX

DATE:
XX/XX

DATE:
XX/XX

DATE:
XX/XX

FIELD BOOK NO.:
XXX

SHEET:
1"=4'

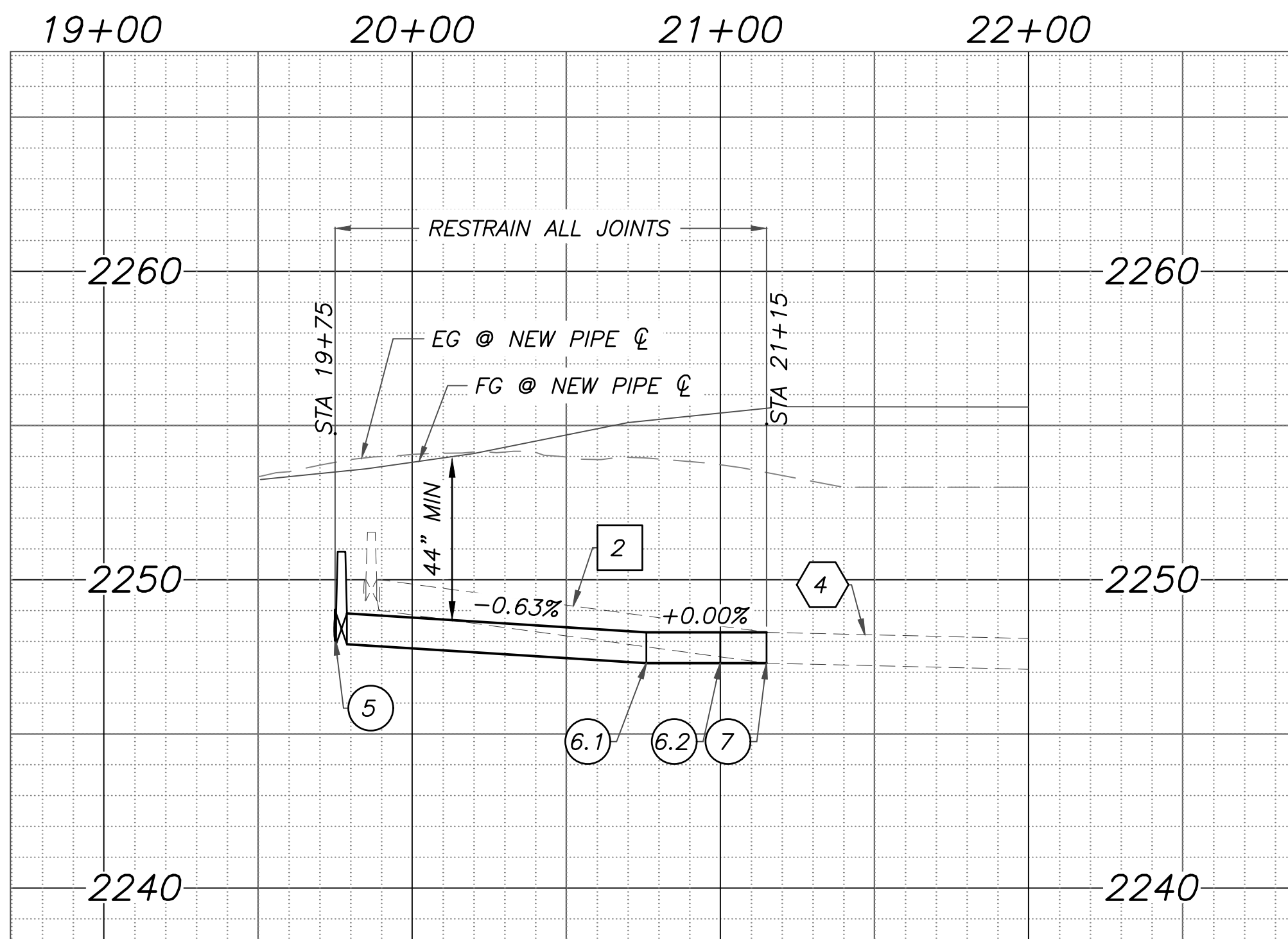
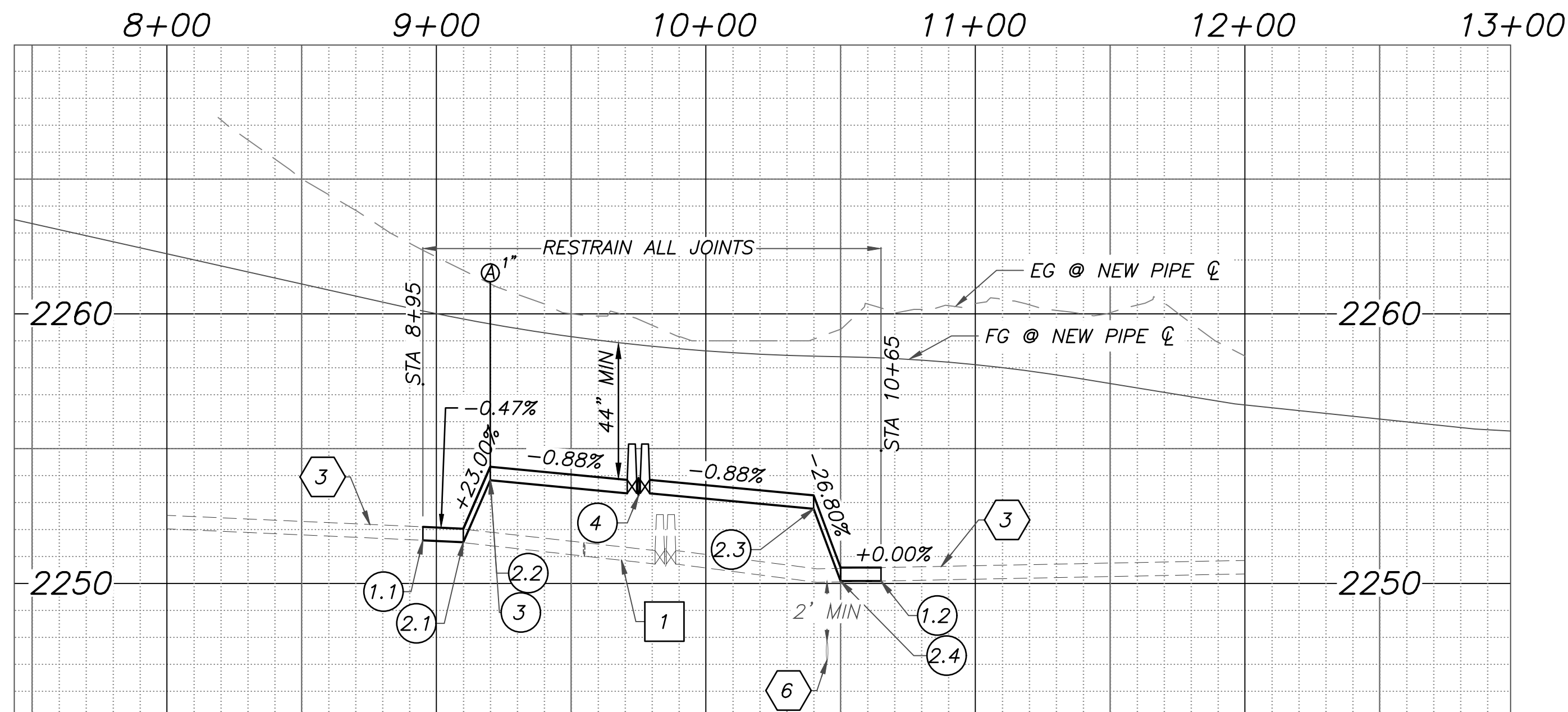
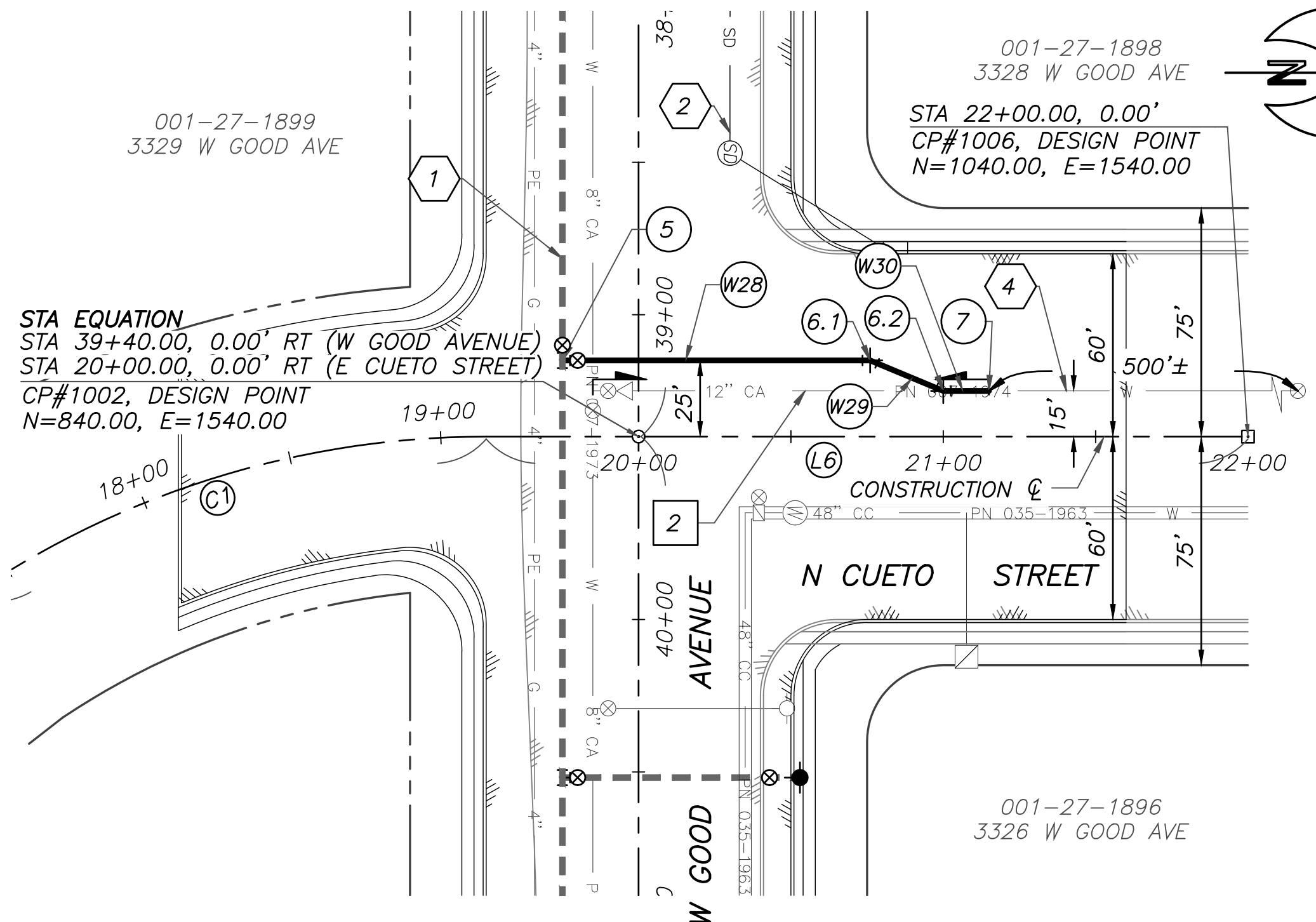
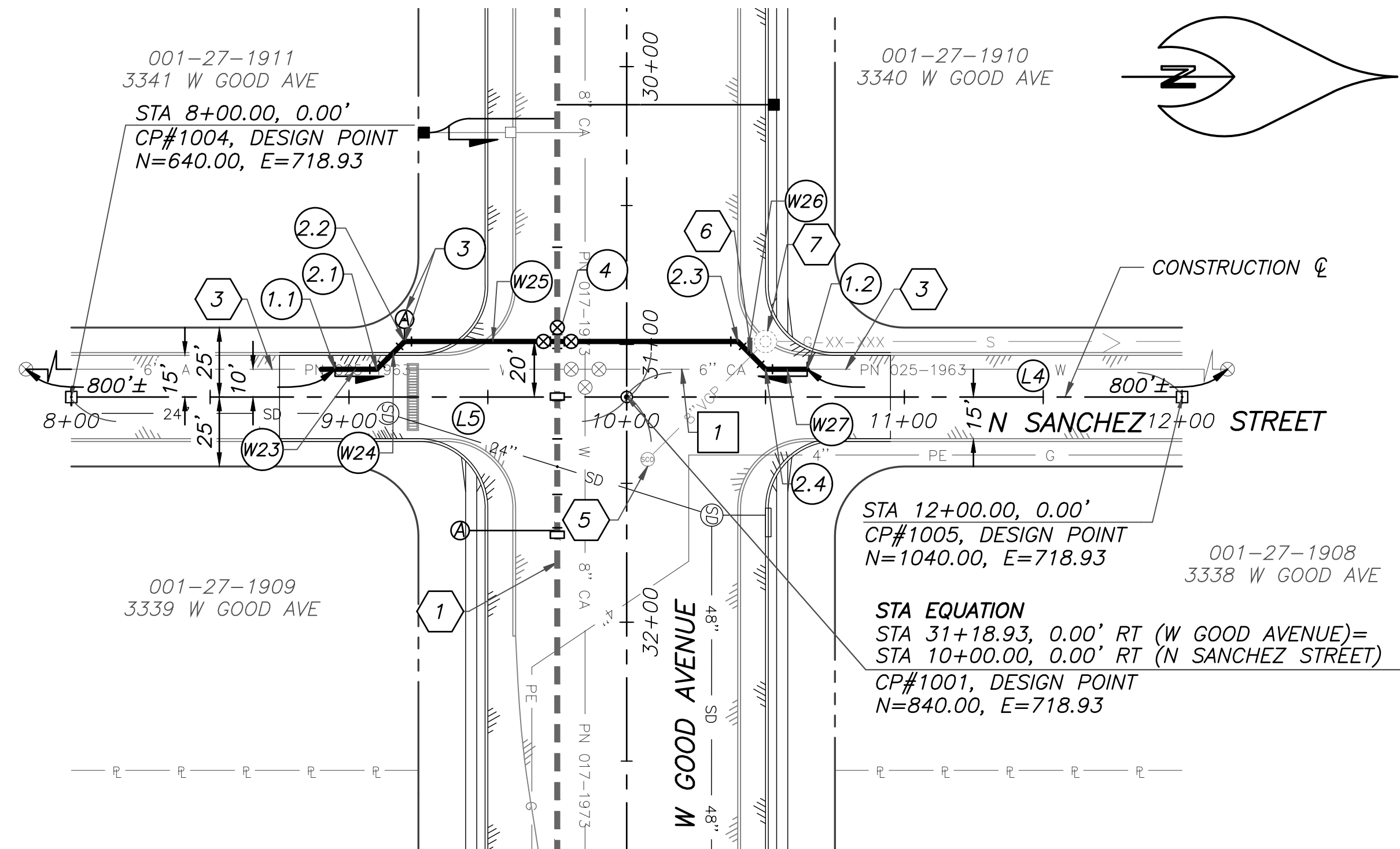
VERT:
1"=40'

HORIZ:
1"=40'

PAGE NO:
106 OF 185

PLAN NO.
X-XXX-XXXX

(MODIFICATIONS ONLY)TW PLAN NO X-XXX-XXXX



WATERLINE TABLE			
W#	BEARING	LENGTH	SIZE / MATERIAL
W23	N00°00'00"E	20.0 LF	6" PVC PC305 (DR14)
W24	N45°00'00"W	14.1 LF	6" PVC PC305 (DR14)
W25	N00°00'00"E	120.0 LF	6" PVC PC305 (DR14)
W26	N45°00'00"E	14.1 LF	6" PVC PC305 (DR14)
W27	N00°00'00"E	15.0 LF	6" PVC PC305 (DR14)
W28	N00°00'00"E	101.0 LF	12" PVC PC305 (DR14)
W29	N22°37'12"E	26.0 LF	12" PVC PC305 (DR14)
W30	N00°00'00"E	15.0 LF	12" PVC PC305 (DR14)



AGENCIES LOGO					
NO.	BY	DATE	REVISION	APPR.	DATE

- ☐ REMOVE / ABANDON NOTES
- 1

STA 8+95, 10' LT TO STA 10+65, 10' LT
REMOVE & DISPOSE 10" CA AND SMALLER
PIPE TO NEAREST JOINT PER SD-350

170± LF
- 2

STA 19+85, 15' LT TO STA 21+15, 15' LT
REMOVE & DISPOSE 12" CA AND LARGER
PIPE TO THE NEAREST JOINT PER SD-350

130± LF
- ☐ CONSTRUCTION NOTES
- 1.1

STA 8+95.00, 10.0' LT
N 735.00, E 708.93
INV ELEV=2251.60
- 1.2

STA 10+65.00, 10.0' LT
N 905.00, E 708.93
INV ELEV=2250.09
CONNECT TO EXIST 6" CA PIPE

2 EA (NPI)
- 2.1

STA 9+10.00, 10.00' LT (RO)
N 750.00, E 708.93
INV ELEV=2251.53
- 2.2

STA 9+20.00, 20.00' LT (RO)
N 760.00, E 698.93
INV ELEV=2253.83
- 2.3

STA 10+40.00, 20.00' LT (RO)
N 880.00, E 698.93
INV ELEV=2252.77
- 2.4

STA 10+50.00, 10.00' LT (RO)
N 890.00, E 708.93
INV ELEV=2250.09
6" X 45° BEND

4 EA (NPI)
- 3

STA 9+20.00, 20.0' LT (LOCATION OF TAP)
N 760.00, E 698.93
INV ELEV=2253.83
STA 9+20.00, 28.0' LT (LOCATION OF ARV)
N 760.00, E 690.93
1" ARV PER SD-330

1 EA
- 4

STATION EQUATION
STA 30+98.93, 25.0' RT (W GOOD AVENUE)=
STA 9+75.00, 20.0' LT (N SANCHEZ STREET)
N 815.00, E 698.93
INV ELEV=2253.26
CONNECT TO 8" X 6" CROSS
6" GATE VALVE, B & C (N, S)

2 EA
- 5

STATION EQUATION
STA 39+15.00, 25.0' RT (W GOOD AVENUE)=
STA 19+75.00, 25.0' LT (E CUETO STREET)
N 815.00, E 1515.00
INV ELEV=2248.07
CONNECT TO 12" X 8" TEE
12" GATE VALVE, B & C (N)

1 EA
- 6.1

STA 20+76.00, 25.0' LT (HORIZ)
N 916.00, E 1515.00
INV ELEV=2247.29
- 6.2

STA 21+00.00, 15.0' LT (HORIZ)
N 940.00, E 1525.00
INV ELEV=2247.29
12" X 22.5° BEND

2 EA (NPI)
- 7

STA 21+15.00, 15.0' LT
N 955.00, E 1525.00
INV ELEV=2247.29
CONNECT TO EXIST 12" CA PIPE

1 EA (NPI)
- ☐ REFERENCE NOTES
- 1

FOR LATERAL WATER MAIN PLAN & PROFILE, SEE SHEET
W4 & W5
- 2

PROPOSED STORM DRAIN, SEE PAGE ***
- 3

EXIST 8" CA PIPE (TO REMAIN)
- 4

EXIST 12" CA PIPE (TO REMAIN)
- 5

SEWER CLEANOUT #XXXX-XX
RIM ELEV=2259.0, INV ELEV=UNK
- 6

STA 10+45, 15.0' LT
INV ELEV=UNK
8" VCP SEWER CROSSING PER SD-106
- 7

SEWER MANHOLE #XXXX-XX
RIM ELEV=2259.0
INV ELEV=UNK

FOR WATER SYSTEM
MODIFICATIONS (MODS) ONLY

W6 OF W12



CITY OF TUCSON

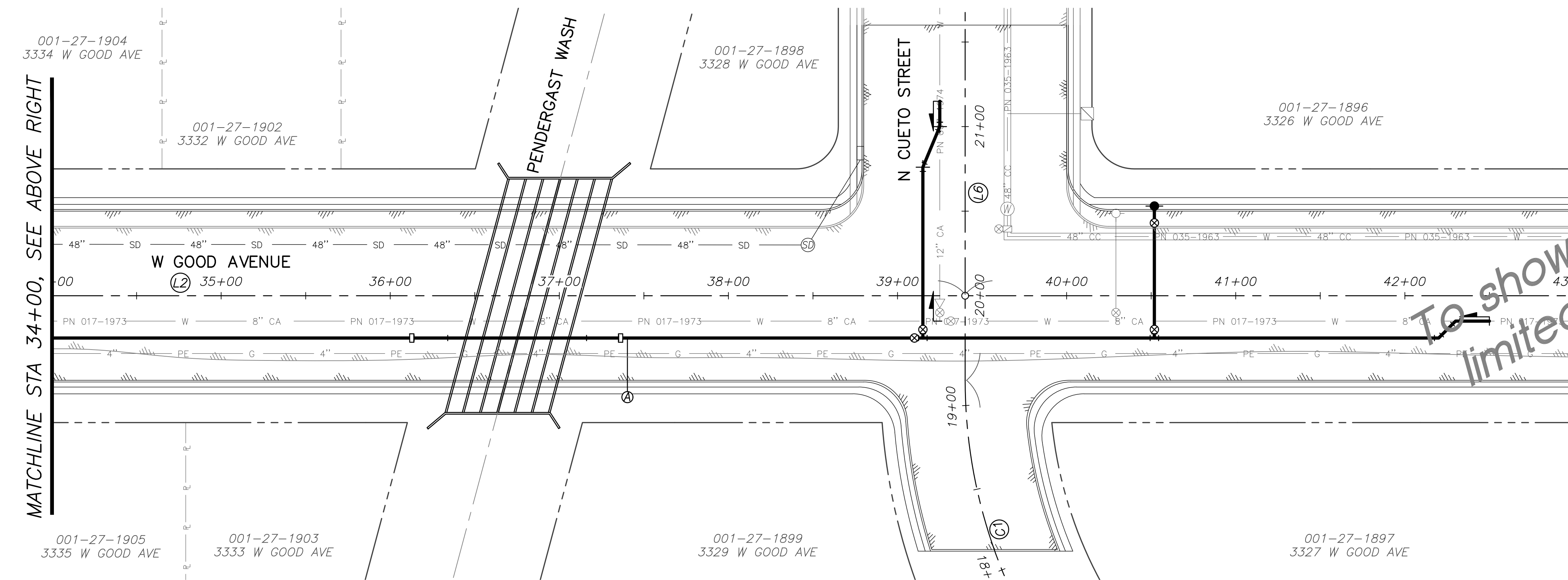
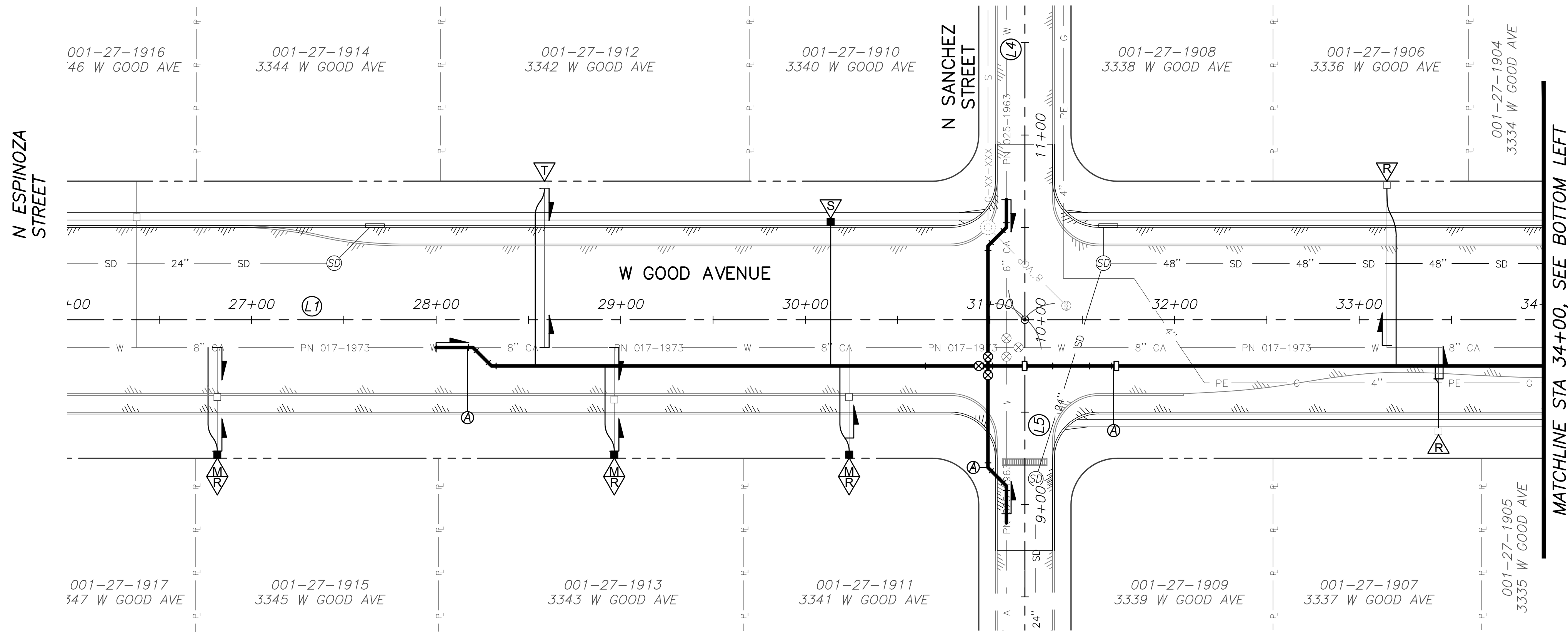
W GOOD AVENUE
N ESPINOZA STREET TO N HUNTER STREET

RESERVE FOR
ENGINEER'S
SEAL

N SANCHEZ STREET
STA 8+95 TO STA 10+65
N CUETO STREET
STA 19+75 TO STA 21+15

DESIGNED BY: XXX	DATE: XX/XX	PAGE NO.: XXX
DRAWN BY: XXX	DATE: XX/XX	SCALE: 1"=4'
CHECKED BY: XXX	DATE: XX/XX	PLAN NO.: 108 OF 185
		VER: 1"=40'
		PLAN NO.: X-XXX-XXXX

(MODIFICATIONS ONLY) TW PLAN NO X-XXX-XXXX



SERVICE WORK				
ADDRESS/STA	EXIST SERV	SERV WORK	EXIST CONNECTION DIA - MATL	NEW CONNECTION DIA - MATL
3342 W GOOD AVE	M (1")	T	1" - CU	1" - CU
STATION 30+41± (IRRIGATION)	-	S	-	2" - CU
3345 W GOOD AVE	M (5/8")	M/R	3/4" - CU	1" - CU
3343 W GOOD AVE	M (5/8")	M/R	3/4" - CU	1" - CU
3341 W GOOD AVE	M (5/8")	M/R	3/4" - CU	1" - CU
3336 W GOOD AVE	M (5/8")	R	1" - CU	1" - CU
3337 W GOOD AVE	M (5/8")	R	1" - CU	1" - CU

THIS SHEET OPTIONAL
To show service work only for projects with
limited space availability on individual plan
and profile sheets.
Quantities must match sheet quantities.

FOR WATER SYSTEM MODIFICATIONS (MODS) ONLY

W7 OF W12

TUCSON WATER
A proud part of the City of Tucson

CITY OF TUCSON

W GOOD AVENUE
N ESPINOZA STREET TO N HUNTER STREET

RESERVE FOR
ENGINEER'S
SEAL

METER SHEET

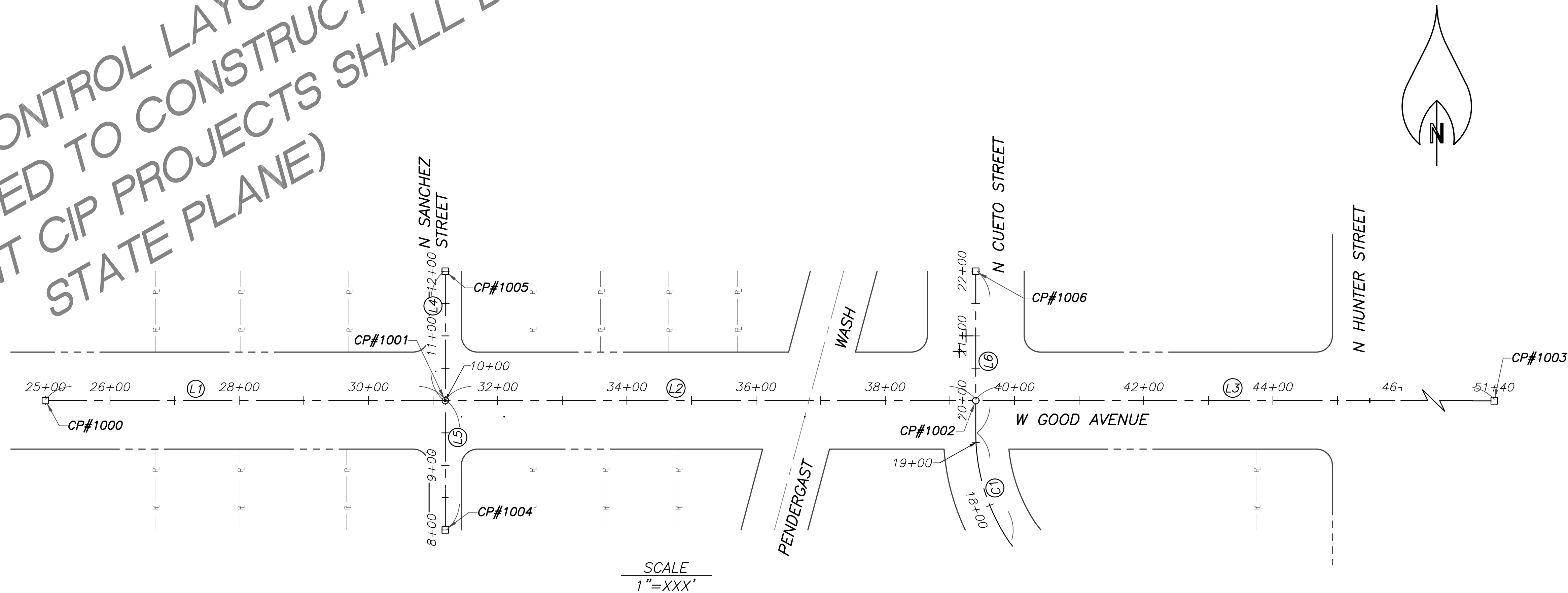
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DRAWN BY: XXX	DATE: XX/XX	SCALE: NO SCALE
CHECKED BY: XXX	DATE: XX/XX	HORIZ: 1"=40'

109 OF 185
PLAN NO.
X-XXX-XXXX
(MODIFICATIONS ONLY) TW PLAN NO X-XXX-XXXX

AGENCIES LOGO					
NO.	BY	DATE	REVISION	APPR.	DATE



INCLUDE SURVEY CONTROL LAYOUT INFORMATION
NEEDED TO CONSTRUCT
(ALL CURRENT CIP PROJECTS SHALL BE IN
STATE PLANE)



SCALE
1"=XXX'

CURVE TABLE			
CURVE #	RADIUS	LENGTH	DELTA
C1	300.00	178.63	34°06'55"

LINE TABLE		
LINE #	BEARING	LENGTH
L1	N90°00'00"E	618.93
L2	N90°00'00"E	821.07
L3	N90°00'00"E	1200.00
L4	N00°00'00"E	200.00
L5	N00°00'00"E	200.00
L6	N00°00'00"E	250.00

POINT TABLE				
CP #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1000	840.00	100.00	0.00	DESIGN POINT
1001	840.00	718.93	0.00	DESIGN POINT
1002	840.00	1540.00	0.00	DESIGN POINT
1003	840.00	2740.00	0.00	DESIGN POINT
1004	640.00	718.93	0.00	DESIGN POINT
1005	1040.00	718.93	0.00	DESIGN POINT
1006	1040.00	1540.00	0.00	DESIGN POINT

NOTE:
UNLESS OTHERWISE NOTED ALL BEARINGS, DISTANCES, AND COORDINATES SHOWN ARE GRID DATA REFERENCED TO THE ARIZONA COORDINATE SYSTEM, 1983, CENTRAL ZONE.

BASIS OF BEARING:
THE BEARINGS FOR THIS PROJECT ARE GRID BASED ON GPS OBSERVATIONS. THE MEASURED DIRECTION BETWEEN CITY OF TUCSON WATER GEODETIC CONTROL POINT XXX AND CITY OF TUCSON WATER GEODETIC CONTROL POINT XXX IS NXX°XX'XX"E.

BASIS OF ELEVATION:
THE ELEVATIONS FOR THIS PROJECT ARE BASED ON THE CITY OF TUCSON WATER GEODETIC CONTROL POINT 998 THE ELEVATION OF SAID POINT BEING XXXX.XXX' NAVD88.

BASIS OF COORDINATES:
THE COORDINATES FOR THIS PROJECT ARE ARIZONA STATE PLANE-CENTRAL ZONE-INTERNATIONAL FEET BASED ON CITY OF TUCSON WATER GEODETIC CONTROL POINT XXX.

XXX HAS A COMBINED SCALE FACTOR OF 0.XXXXXXXX. THIS SHOULD BE USED WHEN CONVERTING GROUND VALUES TO ARIZONA STATE PLANE CENTRAL ZONE (NAD83) VALUES.

XXX HAS A 1/X COMBINED SCALE FACTOR OF 1.XXXXXXXX. THIS SHOULD BE USED WHEN CONVERTING ARIZONA STATE PLANE CENTRAL ZONE (NAD83) VALUES TO GROUND VALUES.

FOR WATER SYSTEM
MODIFICATIONS (MODS) ONLY

WB OF W12



CITY OF TUCSON

W GOOD AVENUE
N ESPINOZA STREET TO N HUNTER STREET

RESERVE FOR
SEAL

SURVEY CONTROL LAYOUT

DESIGNED BY: XXX	DATE: XX/XX	FIELD BOOK NO. XXX	110 OF 185
DRAWN BY: XXX	DATE: XX/XX	SCALE: NO SCALE	
CHECKED BY: XXX	DATE: XX/XX	HORIZ: 1"=XXX'	

PLAN NO.
X-XXX-XXXX

(MODIFICATIONS ONLY)TW PLAN NO X-XXX-XXXX



AGENCIES LOGO

NO.	BY	DATE	REVISION	APPR.	DATE

THIS SHEET OPTIONAL
If project specific details are required for
water modifications, use space available on
sheet W3 or this sheet.

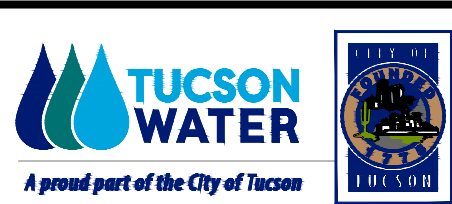
FOR WATER SYSTEM
MODIFICATIONS (MODS) ONLY

W9 OF W12



AGENCIES LOGO

NO.	BY	DATE	REVISION	APPR.	DATE



CITY OF TUCSON

W GOOD AVENUE
N ESPINOZA STREET TO N HUNTER STREET

RESERVE FOR
ENGINEER'S
SEAL

DETAILS

DESIGNED BY: XXX	DATE: XX/XX	FIELD BOOK NO. 416	111 OF 185
DRAWN BY: XXX	DATE: XX/XX	SCALE: NTS	
CHECKED BY: XXX	DATE: XX/XX	HORIZ: NTS	

(MODIFICATIONS ONLY)TW PLAN NO X-XXX-XXXX

PART 1
Completed by Tucson Water Design Engineer

I. PROJECT NAME *****

A. Owner Name and Address:
City of Tucson
Tucson Water
310 W. Alameda
Tucson, Arizona 85701

B. Project Location: *****
City N/A County Pima
Latitude and Longitude (NAD83)
Lat: XX° XX' XX.XX" N Long: XXX° XX' XX.XX" E

C. Project Description and Intended Use:

D. Total Project Area: Length (Ft.) +/- *** ft Area (Ac.): +/-**

To be completed by Contractor (or Contractor's SWPPP Engineer)

E. Area to be Disturbed (Ac.):

F. Runoff coefficients: Existing Developed

G. Receiving Water(s) (Include Wetlands):
Distance from Project:

H. Discharge and/or soils Data Available:
Yes No
If yes, is the data attached?

I. Identify locations of Potential Discharges to Dry Washes or MS4.

II. PRESERVATION OF EXISTING VEGETATION

A. In accordance with the specifications, existing vegetation will be preserved where possible. Clearing limits shall be confined to areas that require grading. Existing vegetation outside the boundaries of the cleared area shall be protected from damage by construction activities. Existing trees within the area to be cleared shall be preserved and protected, wherever possible. Areas where vegetation will be preserved shall be shown on the site plan

III. SOIL STABILIZATION MEASURES

A. All disturbed soil which will not be paved will be protected from erosion in accordance with the project plans and specifications.

IV. MEASURES TO CONTROL EROSION AND SEDIMENT

A. Permanent Erosion and Sediment Controls: (Refer to Project Plans, SWPPP Plan Sheets and Specifications)

BMPs
Ditch/Dike
Rock Outlet Protection
Gravel/Decomposed Granite
Other Describe:

B. Temporary Erosion and Sediment Controls: (Refer to SWPPP Plan Sheets and Specifications)

BMPs
Temporary Diversion Dikes
Sediment Log Barriers
Sediment Log Check/Dikes
Stabilized Construction Site Entrance/Exit
Silt Fence
Stormdrain Inlet Protection
Protection of Trees/Natural Areas
Other Describe:

V. MAINTENANCE AND INSPECTIONS

A. Frequency of Inspections: (Check one)

The site will be inspected a minimum of once every 7 calendar days, or

The site will be inspected a minimum of once every 14 calendar days, and also within 24 hours of each storm event of 0.5 inch or greater in 24 hours; or

The site will be inspected a minimum of once per month, but not within 14 calendar days of the previous inspection and within 24 hours of the occurrence of a storm event of 0.25 inch or greater.

NOTE: The operator shall obtain rainfall information from either a properly maintained rain gauge on the site, or a weather station that is representative of the site's location

B. The following Contractor Personnel meet the requirements of "Qualified Personnel" as described in the AZPDES General Permit:

C. Maintenance:
Clean and/or replace BMPs when design capacity is reduced by 50%.

D. The SWPPP will be modified to meet changing site conditions.

PART 2 – To be completed by Contractor (or Contractor's SWPPP Engineer)

I. SCHEDULE OF MAJOR ACTIVITIES

A. Project Schedule
Start Date: End Date:

B. Construction Sequencing Schedule (Attach Additional Sheet if Necessary)

Date	Construction Activity	BMP's
Begin:		
End:		
Begin:		
End:		
Begin:		
End:		
Begin:		
End:		
Begin:		
End:		
Begin:		
End:		
Begin:		
End:		

II. SCHEDULE OF STABILIZATION MEASURES

In areas where construction has temporarily or permanently ceased, the following stabilization measures will be implemented within fourteen (14) days.

A. Dates of major grading activity
Begin: End:

B. Dates when construction temporarily or permanently ceases
Temporary Date: Location of the Site:
Permanently Date: Location of the Site:

C. Stabilization Measures
Date Initiated: Date Completed:

III. INVENTORY OF POLLUTANTS

A. The materials or substances checked below are expected to be onsite during construction:

Concrete	Asphalt
Paints	Fertilizer
Herbicides	Wood
Fuel	Oil
Others, List:	

IV. NON-STORMWATER FLOWS

Dust Control Watering
Vehicle and Equipment Washing
Dewatering Operations
Waterline Flushing
Other

Describe BMPs to Address Non-Storm Flows

V. POLLUTION CONTROL MEASURES

A. Good Housekeeping Controls
Street Sweeping as Needed to Control Tracking
Stockpile Controls
Solid Waste Management
Equipment Maintenance Procedures
Other

B. Source Controls (Locate on Site Map)

Designated Concrete Washout Area
Equipment Fueling Area
Contractor Staging Area
Protected Chemical and Material Storage Area
Restroom Facilities
Stabilized Construction Entrance
Secondary Containment for all Chemical Storage
Other

C. Will the Contractor utilize off-site material, waste, or borrow equipment storage areas?
Yes No

VI. OTHER REQUIREMENTS

A. This SWPPP will be kept on-site or in a readily accessible location during project work hours.

B. Copies of the NOI's and authorization number are included in this SWPPP.

C. As appropriate, this SWPPP will include measures to comply with applicable Federal, State, and Local Regulations.

D. The contractor shall be familiar with ADOT's Erosion and Pollution Control Manual and shall keep a copy with the SWPPP documents during construction. Copies are available from City of Tucson, Department of Transportation, Stormwater Management Section (520-791-4251).

VII. POLLUTION PREVENTION PLAN CERTIFICATION

A. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibilities of fine and imprisonment for knowing violations.

SWPPP Engineer
Name (Print):
Signature:
Title:
Date:
Area of Responsibility: Control of Project SWPPP Plans and Specifications

Contractor
Name (Print):
Signature:
Title:
Company:
Date:
Area of Responsibility: On-site implementation of SWPPP, day to day operational control of project site.

Sub-Contractor
Name (Print):
Signature:
Title:
Company:
Date:
Area of Responsibility:

Sub-Contractor
Name (Print):
Signature:
Title:
Company:
Date:
Area of Responsibility:

Sub-Contractor
Name (Print):
Signature:
Title:
Company:
Date:
Area of Responsibility:

VIII. SWPPP REVISION TABLE

The table below shall be completed whenever the SWPPP is revised or updated. Both the Engineer and the Contractor will sign and date to document each completed revision. Attach additional sheets as needed.

SIGNATURE	REVISION DESCRIPTION	RESPONSIBILITY
Contractor Date:		
Engineer Date:		
Contractor Date:		
Engineer Date:		
Contractor Date:		
Engineer Date:		
Contractor Date:		
Engineer Date:		

NOTE: Stormwater Pollution Prevention Plan (SWPPP) Sheets are included in the plans are for reference only. Contractor and SWPPP Engineer are responsible for obtaining the SWPPP permit and the preparation and submittal of all associated documentation related to the approval and implementation of the SWPPP as stipulated in the project specifications.

FOR WATER SYSTEM
MODIFICATIONS (MODS) ONLY

W10 OF W12



CITY OF TUCSON
W GOOD AVENUE
N ESPINOZA STREET TO N HUNTER STREET

FOR
INFORMATION
ONLY

STORMWATER POLLUTION
PREVENTION PLAN NOTES

DESIGNED BY: XXX	DATE: XX/XX	SURVEY REQUEST NO: 416	112 OF 185
DRAWN BY: XXX	DATE: XX/XX	SCALE: VERT: NO SCALE	
CHECKED BY: XXX	DATE: XX/XX	HORIZ: NO SCALE	

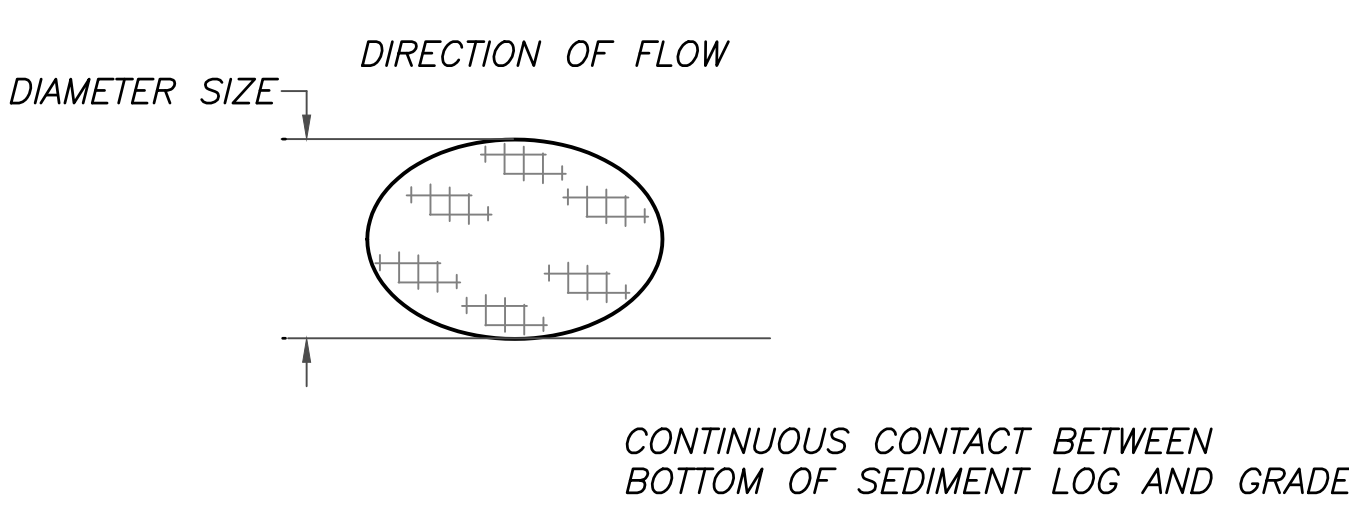
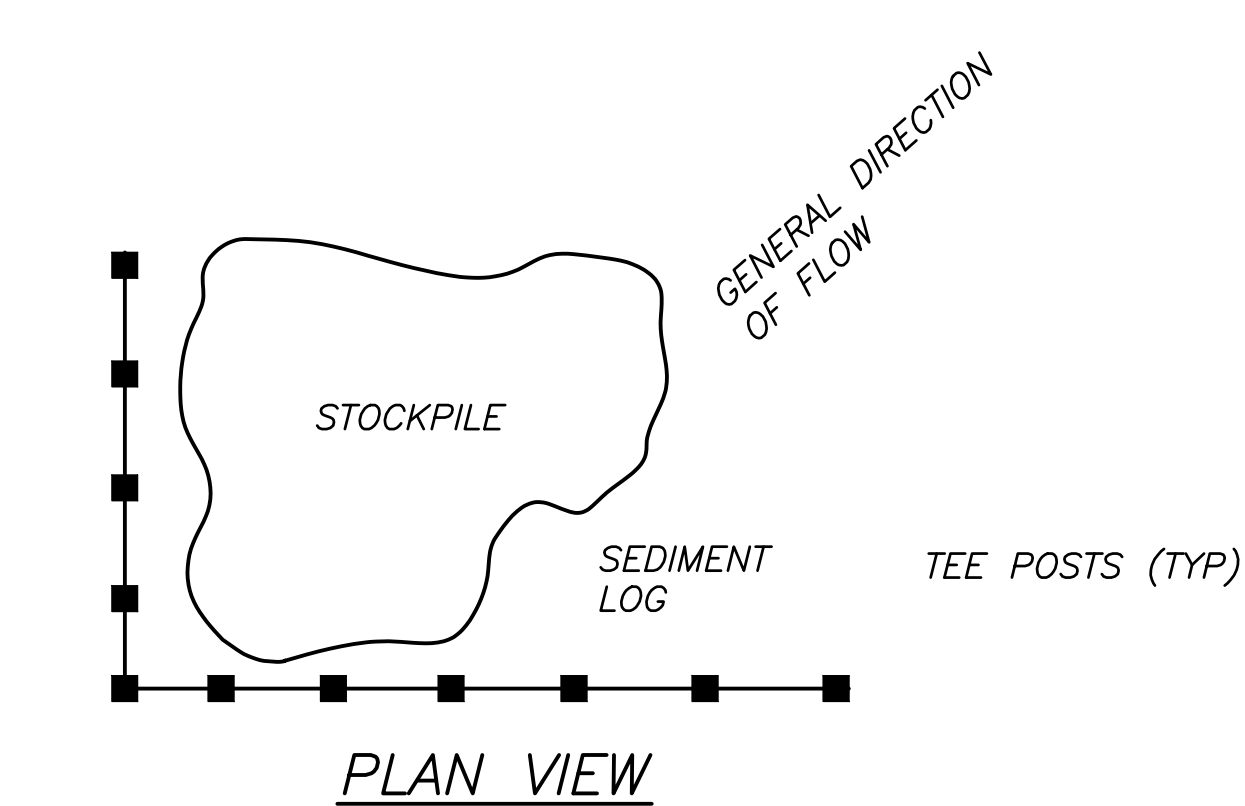
PLAN NO:
X-XXX-XXXX

(MODIFICATIONS ONLY) TW PLAN NO X-XXX-XXXX



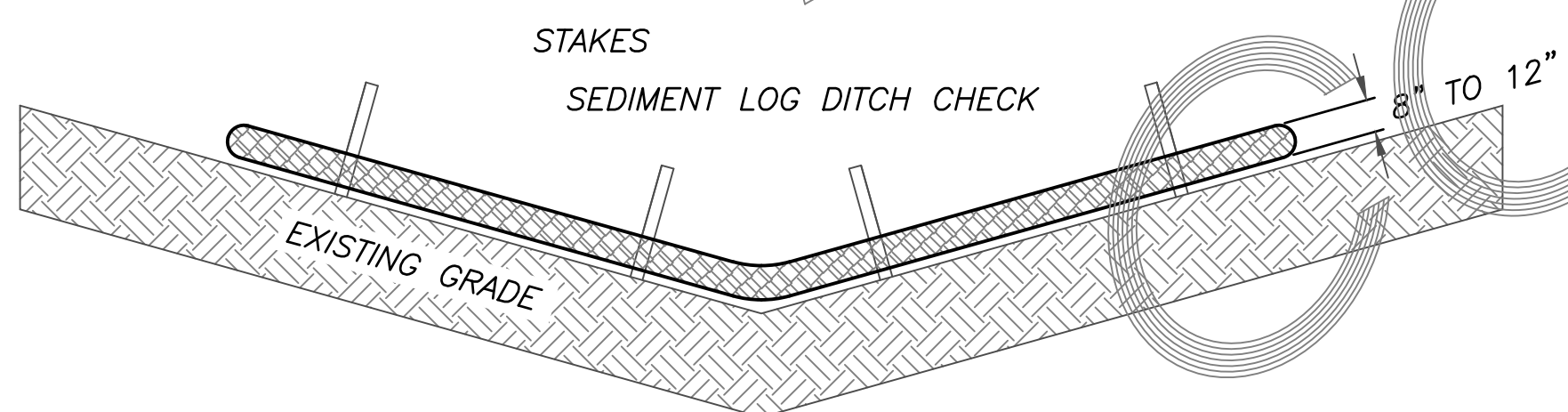
AGENCIES LOGO

NO.	BY	DATE	REVISION	APPR.	DATE

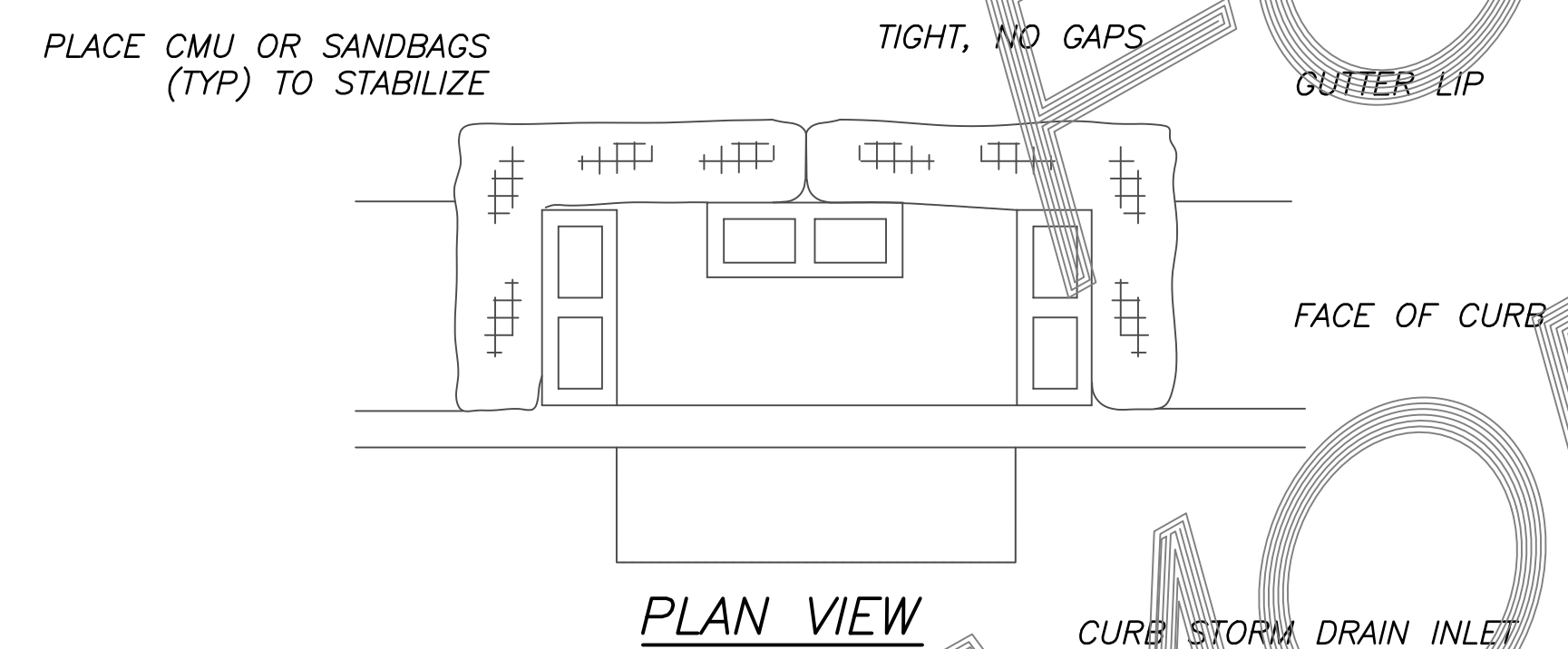


- NOTES:**
1. SEDIMENT LOGS SHALL BE LOCATED AS INDICATED ON SWPPP SITE PLAN OR AS DIRECTED BY THE ENGINEER.
 2. LOGS SHALL BE SELECTED, INSTALLED, AND MAINTAINED WITH MANUFACTURER'S SPECIFICATIONS AND GOOD ENGINEERING PRACTICES.
 3. THE CONTIGUOUS CONTACT BETWEEN THE BOTTOM OF THE LOG AND THE GROUND IS MANDATORY.
 4. REMOVE SEDIMENT ONCE FINAL STABILIZATION REQUIREMENTS ARE MET. CONTRACTOR TO DISPOSE OF SEDIMENT LOGS AND DISPOSE OF TRAPPED SEDIMENT MATERIAL.

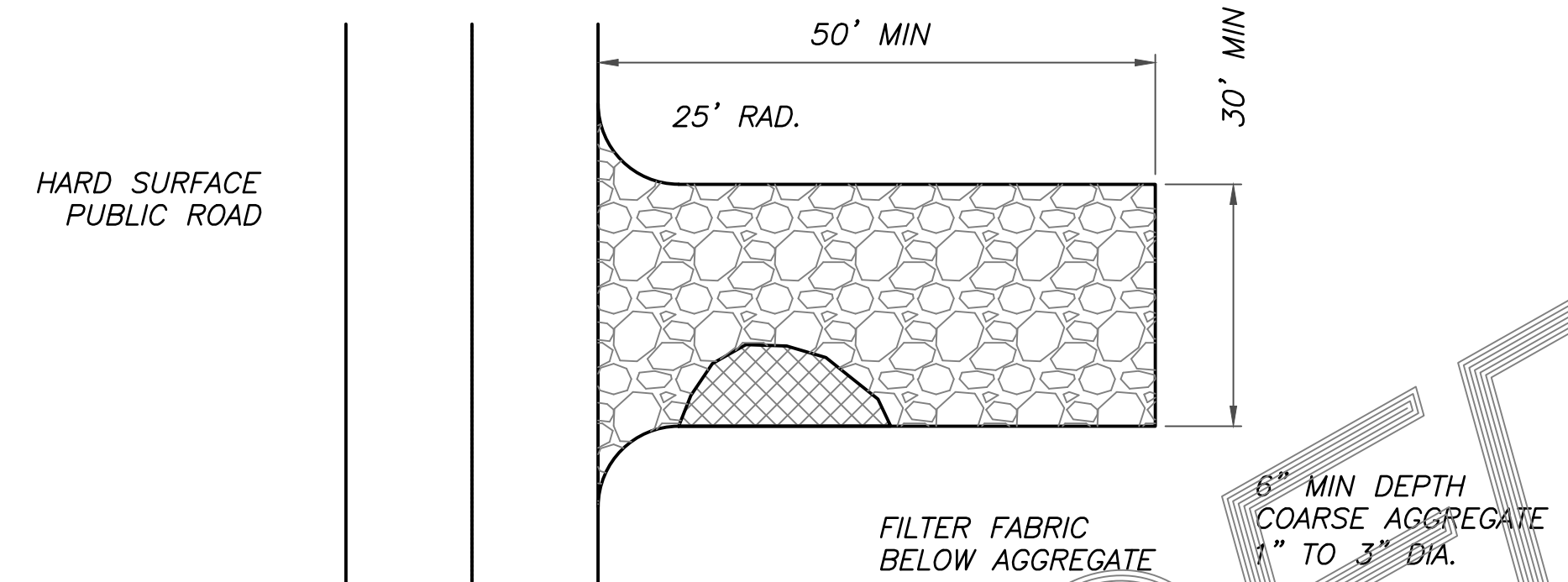
SEDIMENT LOG STOCKPILE PROTECTION DETAIL
NTS



SEDIMENT LOG CHECK/DIKE DETAIL
NTS



SEDIMENT LOG CURB INLET PROTECTION DETAIL
NTS

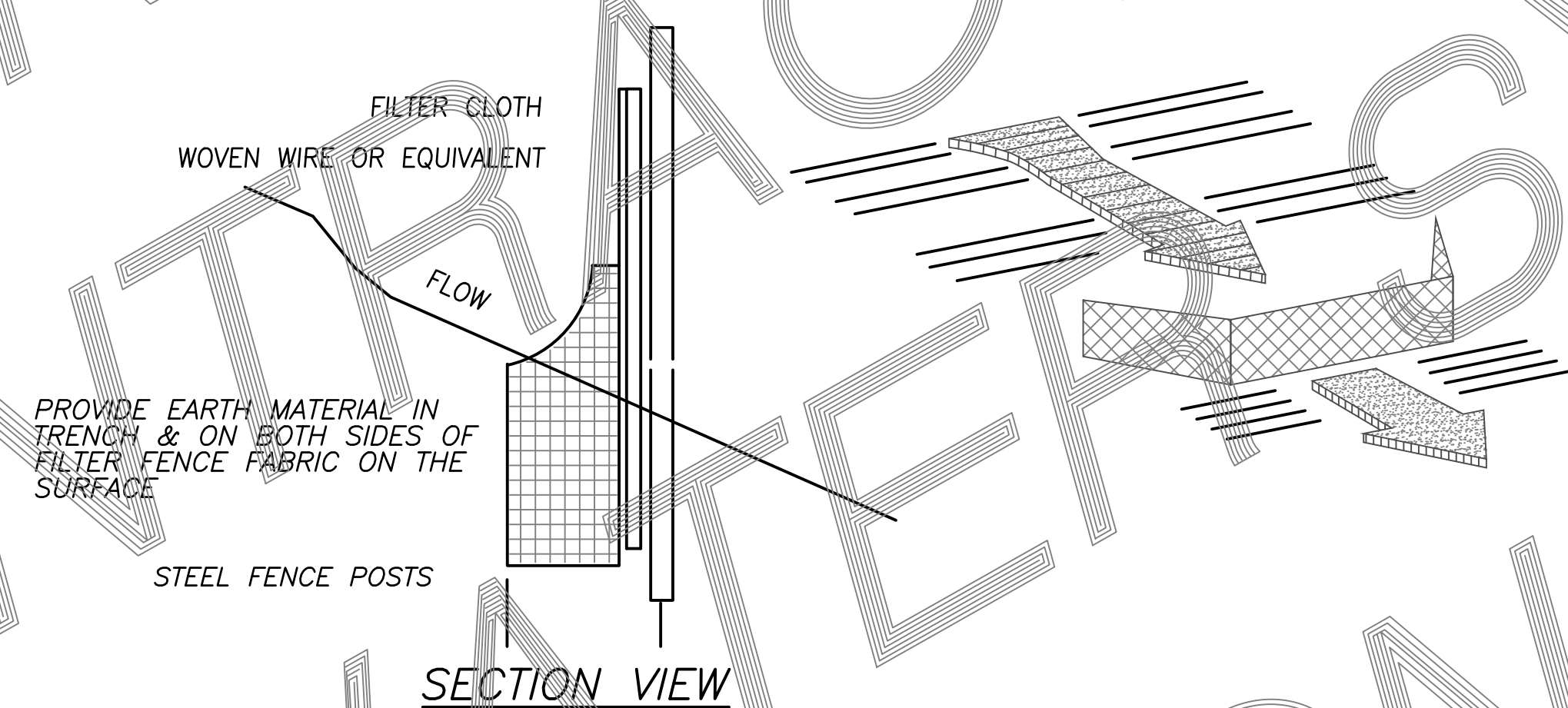


STABILIZED CONSTRUCTION SITE ENTRANCE/EXIT

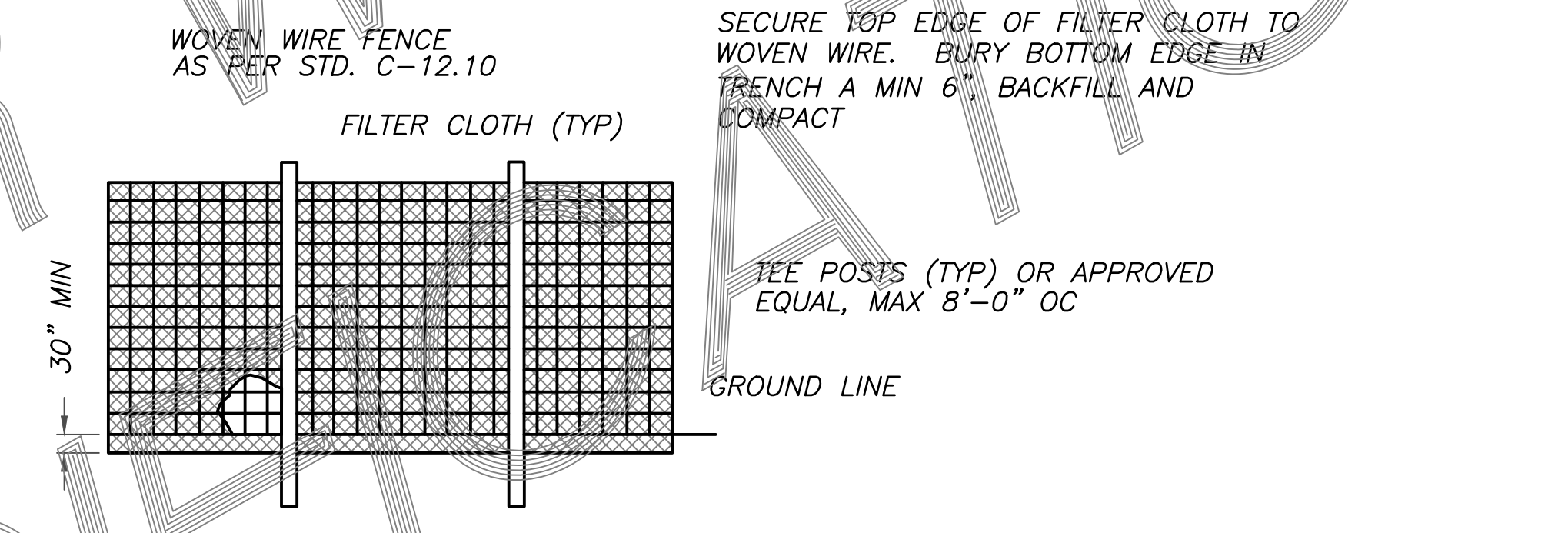
DEFINITION
A STABILIZED PAD OF AGGREGATE UNDERLAIN WITH FILTER CLOTH LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK OR PARKING AREA.

PURPOSE
THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY OR STREETS. REDUCING TRACKOUT OF SEDIMENTS AND OTHER POLLUTANTS ONTO PAVED ROADS HELPS PREVENT DEPOSITION OF SEDIMENTS INTO LOCAL STORM DRAINS AND PRODUCTION OF AIRBORNE DUST.

APPROPRIATE APPLICATIONS
A STABILIZED CONSTRUCTION ENTRANCE SHOULD BE USED AT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS. NPDES PERMITS REQUIRE THAT APPROPRIATE MEASURES BE IMPLEMENTED TO PREVENT TRACKOUT OF SEDIMENTS ONTO ROADWAYS.



— SILT FENCE FILTER FABRIC IN THE INSTALLATION TRENCH SHALL BE BURIED A MINIMUM OF TWENTY INCHES. THE SECTION OF THE TRENCH SHALL BE A MINIMUM OF 6" (DEEP) X 8" (WIDE). FILTER FABRIC IS TO BE BURIED ALONG THE SIDE AND BOTTOM OF THE TRENCH & BACK UP TO THE UPSTREAM SLOPE GRADE SILT FENCE FILTER FABRIC SECTION SHALL BE A "U" TO PREVENT UNDER CUTS AND CARRY STRESS FROM UPSTREAM SEDIMENT LOADING.



SILT FENCE

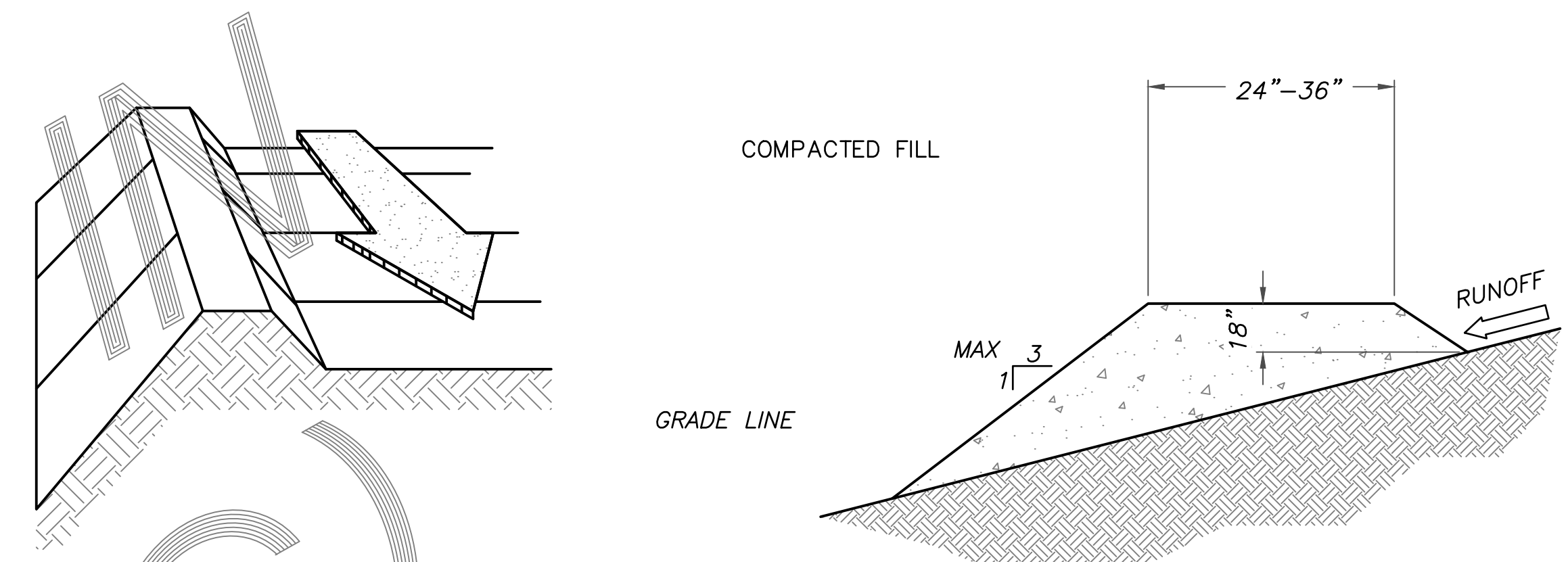
DEFINITION
TEMPORARY SEDIMENT BARRIER CONSISTING OF FILTER FABRIC WITH WIRE FENCE AS NEEDED FOR SUPPORT

PURPOSE

1. INTERCEPT AND DETAIN SEDIMENT FROM DISTURBED AREAS DURING CONSTRUCTION
2. DECREASE THE VELOCITY OF SHEET FLOWS AND LOW-TO-MODERATE LEVEL CHANNELS.

APPROPRIATE APPLICATIONS
SILT FENCES MUST BE PROVIDED JUST UPSTREAM OF THE POINT(S) OF DISCHARGE OF RUNOFF FROM THE SITE, BEFORE THE FLOW BECOMES CONCENTRATED. THEY MAY ALSO BE USED:

1. BELOW DISTURBED AREAS WHERE RUNOFF MAY OCCUR IN THE FORM OF SHEET AND RILL EROSION; WHEREVER RUNOFF HAS THE POTENTIAL TO IMPACT DOWNSTREAM RESOURCES.
2. PERPENDICULAR TO MINOR SWALES OR DITCH LINES FOR UP TO ONE ACRE CONTRIBUTING DRAINAGE AREAS.



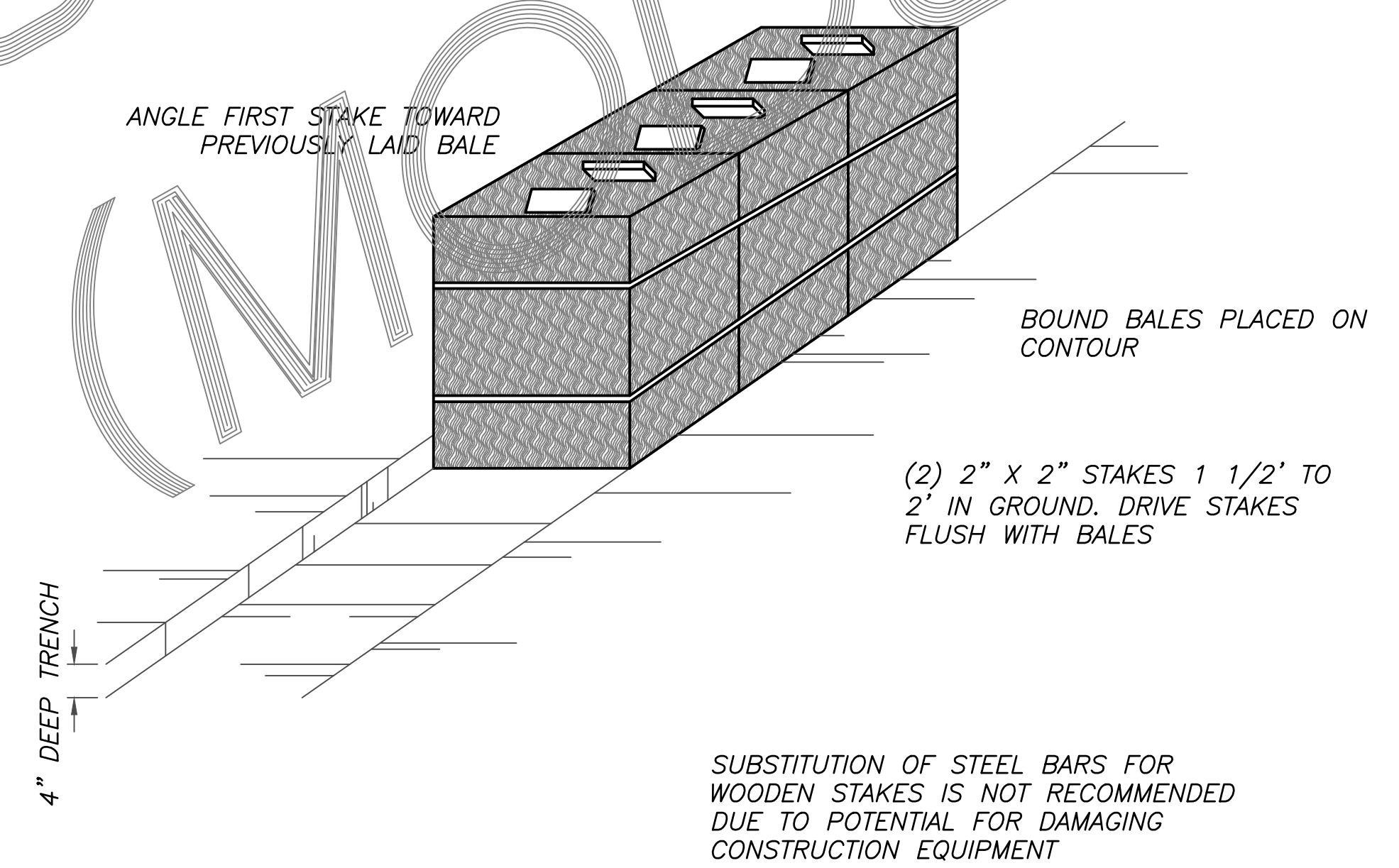
NOTE: SIZE OF DIKE IS BASED ON INDIVIDUAL SITE. DIMENSIONS SHOWN ARE FOR GENERAL INFORMATION ONLY.

TEMPORARY DIVERSION DIKE

DEFINITION
A TEMPORARY BERM OR RIDGE OF COMPACTED SOIL, LOCATED IN SUCH A MANNER AS TO CHANNEL WATER TO A DESIRED LOCATION

PURPOSE
THE PURPOSE OF A TEMPORARY DIVERSION DIKE IS TO DIRECT RUNOFF TO A SEDIMENT TRAPPING DEVICE OR STABILIZED OUTLET, AND TO REDUCE THE POTENTIAL FOR EROSION TEMPORARY DIVERSION DIKES CAN ALSO BE USED FOR DIVERTING CLEAN WATER AWAY AND SHEET FLOWS AWAY FROM DISTURBED AREAS AND UNPROTECTED SLOPES.

APPROPRIATE APPLICATIONS
TEMPORARY DIVERSION DIKES ARE OFTEN CONSTRUCTED UPSTREAM OF DISTURBED AREAS AND AROUND CONSTRUCTION SITES. THE DIKES SHOULD REMAIN IN PLACE UNTIL THE DISTURBED AREAS ARE PERMANENTLY STABILIZED. THE DIKES MUST BE ON-SITE AND MAINTAIN THE INFLOW AND OUTFLOW CONDITIONS OF THE HISTORIC DRAINAGE PATTERN





STRAW BALE DIKE

DEFINITION
A TEMPORARY BARRIER OF STRAW BALES OR SIMILAR MATERIAL USED TO INTERCEPT SEDIMENT LADEN RUNOFF FROM SMALL DRAINAGE AREAS OF DISTURBED SOIL.

PURPOSE
THE PURPOSE OF A STRAW BALE DIKE IS TO REDUCE RUNOFF VELOCITY AND CAUSE DEPOSITION OF THE TRANSPORTED SEDIMENT LOAD.

APPROPRIATE APPLICATIONS
THE STRAW BALE DIKE IS USED WHERE THERE ARE NO CONCENTRATIONS OF WATER IN A CHANNEL OR DRAINAGE WAY AND WHERE EROSION WOULD OCCUR FROM SHEET FLOW. THESE BARRIERS ARE TYPICALLY CONSTRUCTED BELOW DISTURBED AREAS SUBJECT TO SHEET FLOW OF RUNOFF TO INTERCEPT AND DETAIN SEDIMENT

AGENCIES LOGO

 		CITY OF TUCSON	
W GOOD AVENUE		N ESPINOZA STREET TO N HUNTER STREET	
FOR INFORMATION ONLY		STORMWATER POLLUTION PREVENTION DETAILS	
DESIGNED BY: XXX	DATE: XX/XX	SURVEY REQUEST NO: 416	113 OF 185
DRAWN BY: XXX	DATE: XX/XX	SCALE: NTS	
CHECKED BY: XXX	DATE: XX/XX	HORIZ: NTS	

NO.	BY	DATE	REVISION	APPR.	DATE



N ESPINOZA STREET

N SANCHEZ STREET

N CUETO STREET

W GOOD AVENUE

PROJECT VICINITY TOPO MAP
1"=100'

FOR WATER SYSTEM
MODIFICATIONS (MODS) ONLY

W12 OF W12



CITY OF TUCSON
**W GOOD AVENUE
N ESPINOZA STREET TO N HUNTER STREET**

FOR
INFORMATION
ONLY

STORMWATER POLLUTION
PREVENTION CONTOUR SHT

DESIGNED BY: XXX	DATE: XX/XX	SURVEY REQUEST NO: 416	114 OF 185 PLAN NO. X-XXX-XXXX
DRAWN BY: XXX	DATE: XX/XX	SCALE: NO SCALE	
CHECKED BY: XXX	DATE: XX/XX	HORIZ: 1"=100'	



AGENCIES LOGO

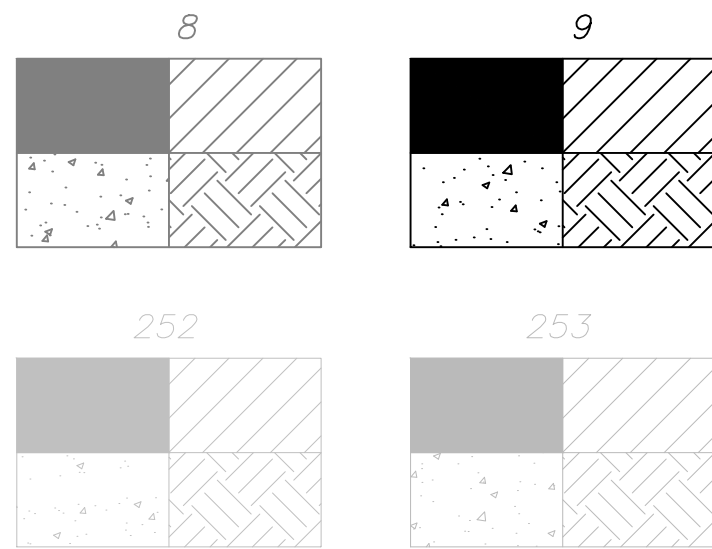
NO.	BY	DATE	REVISION	APPR.	DATE

(MODIFICATIONS ONLY)TW PLAN NO X-XXX-XXXX

Water Modifications
Pen Settings
Black & White

COLOR	SCREENING	LINEWEIGHT	
RED (1)	100	0.0079"	(SEE NOTE 1)
YELLOW (2)	100	0.0138"	
GREEN (3)	100	0.0197"	
BLUE (5)	100	0.0079"	
MAGENTA (6)	100	0.0138"	
WHITE (7)	100	0.0098"	
8	40	0.0098"	(EXIST. TOPO CULTURE – LINEWORK)
9	60	0.0138"	(PROFILE GRID – MINOR)
10	60	0.0051"	(EXIST. ELECTRIC)(SEE NOTE 1)
11	100	0.0209"	(STREET NAME)
12	100	0.0079"	(EXIST. PROPERTY LINE, EASEMENT, QUARTER SECTION LINE)
13	100	0.0138"	(PROFILE GRID MAJOR)
21	90	0.0000"	(PAVEMENT REPLACEMENT AND CHIP SEAL)
30	60	0.0051"	(EXIST. COMM, TELE, CATV)(SEE NOTE 1)
33	60	0.0051"	(PROFILE GRID MID)
40	60	0.0098"	(EXIST. INTERMEDIATE CONTOUR – MINOR)
41	60	0.0138"	(EXIST. INDEX CONTOUR – MAJOR)
43	100	0.0059"	(EXIST. CONTOUR LABELS)
50	80	0.0051"	(EXIST. GAS)(SEE NOTES 1 & 2)
51	80	0.0051"	(EXIST. PETROLEUM)(SEE NOTES 1 & 2)
71	60	0.0051"	(EXIST. UNKNOWN)(SEE NOTE 1)
90	60	0.0051"	(EXIST. SEWER)(SEE NOTE 1)
100	75	0.0197"	(EXIST. CITY LIMITS, ROW, SECTION LINE)
121	60	0.0051"	(EXIST. STORMDRAIN)(SEE NOTE 1)
131	60	0.0051"	(EXIST. IRRIG)(SEE NOTE 1)
132	100	0.0472"	(COVER SHEET WATERLINE UNDER 24")
141	80	0.0051"	(EXIST. WATER)(SEE NOTE 1)
150	100	0.0276"	(NEW WATER LINE – PROFILE VIEW)
153	100	0.0177"	(NEW WATER APPURTENANCES – PROFILE VIEW)
154	100	0.0177"	(NEW WATER APPURTENANCES LATERAL – PROFILE VIEW)
160	100	0.0417"	(NEW WATER LINE UP TO 24" – PLAN VIEW)
161	100	0.0417"	(NEW WATER LINE UP TO 24" LATERAL – PLAN VIEW)(SEE NOTE 4)
162	100	0.0138"	(NEW WATER APPURTENANCES – PLAN VIEW)
163	100	0.0138"	(NEW WATER APPURTENANCES – PLAN VIEW)
170	100	0.0197"	(NEW WATER LINE 24"+ – PLAN VIEW)
171	100	0.0197"	(NEW WATER LINE 24"+ LATERAL – PLAN VIEW)(SEE NOTE 4)
200	100	0.0417"	(TITLE BLOCK – OUTER BORDER)
201	60	0.0051"	(EXIST. RECLAIMED WATER)(SEE NOTE 1)
202	100	0.0236"	(NEW RECLAIMED WATER & APPURTENANCES)
203	100	0.0236"	(NEW RECLAIMED WATER & APPURTENANCES)
211	60	0.0051"	(EXIST. FIBER OPTIC)(SEE NOTE 1)
242	0	USE OBJ LINEWEIGHT	(SEE NOTE 3)
250	40	0.0276"	
251	40	0.0417"	
252	25	0.0051"	
253	30	0.0051"	

COLOR GRAY IS USE FOR:
EXIST CULTURE/HATCH/SHADING/THIN LINEWORK



NOTES:

- LINE JOIN STYLE SETTING = MITER.
- COLOR 50 IS A COMBINATION OF COLORS FOUND UNDER THE COLOR BOOKS TAB IN THE RAL CLASSIC PULL DOWN AS COLOR RAL 1018.
- COLOR 242 IS A NON-PLOT SOLID HATCH USED AS WIPEOUT FOR SYMBOLS.
- LINE TYPE IS DASHED IN CTB FILE.
- DO NOT USE TUCSON WATER LOGO COLORS: 35, 41, 66, 138, 140, 142, 168, 249 AND 253

